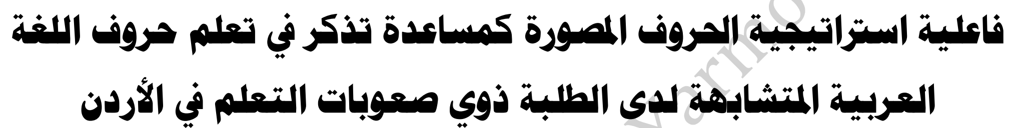
ƥǋǰǮƥĬǁ ƕƴǮǑɯ
ƕĬǴƥƗǁ ƕĬǂǀ
ăǋǴƥƗǁǋ ăǫǑʅƥǕƹ Ƨƺǁǁ !ǂY !ƨƽ


فاعلية استراتيجية الحروف المصورة كمساعدة تذكر في تعلم حروف اللغة
العربية المتشابهة لدى الطلبة ذوي صعوبات التعلم في الأردن

The Effectiveness of Pictured Letters Mnemonics Strategy in Learning Similar Arabic Language Letters among Learning Disabled Students in Jordan

إعداد

ǂǉƵǴǉǂ ǅŏǋƒƧƕǫ ǇǆǮơƧ!ƒ ƥƕƵ ƥǆǮơǆ

ƧĂǩǂƥ!ƒ ƻƒƧƬǫ
ƥƒƥǀǆ!ƒ ǅŏǋƒƧƕǫ Ʃŏp

ƕƬǂǪ ƕĬǴƥǂ - ƫ ƬǪǂǁ üƨΘ

ĬǆǂǁǁĬ ƨƐƥǫǁǁ üƬƺǁǁ
!2013

فاعلية استراتيجية الحروف المصورة كمساعدة تذكر في تعلم حروف اللغة العربية المتشابهة لدى الطلبة ذوي صعوبات التعلم في الأردن

إعداد

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بكالوريوس تربية خاصة، كلية العلوم التربوية، الجامعة الأردنية، 2005م

قدمت هذه الرسالة استكمالا لمتطلبات الحصول على درجة الماجستير في التربية، تخصص تربية خاصة، جامعة اليرموك

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تاريخ مناقشة الرسالة

2013 / 5/6

الإهداء

إلى من عجزت كلماتي عن شكره ....والدي العزيز

إلى من وُضعت الجنة تحت أقدامها ....أمي الغالية

إلى من نجحت بسر دعائهم............. إخواني وأخواتي

إلى من أنارت قلبي ودربي برفقتها ....زوجتي الحبيبة

إلى الأمل كل الأمل.................ابنتي ندى

إلى من أسقوني من ينابيع علمهم..............أساتذتي

[illegible]

قائمة المحتويات

Ɨơ5Ʈ!ƒ	YĂ ư Ădž!ƒ

[illegible]

[illegible] | [illegible]

قائمة الجداول

[illegible]	[illegible]	[illegible]
35	[illegible]	1
41	[illegible]	2
49	[illegible]	3
50	[illegible]	4
52	[illegible]	5
53	[illegible]	6
54	[illegible]	7
56	[illegible]	8
57	[illegible]	9
58	[illegible]	10

قائمة الملاحق

[illegible]

[illegible] .2013 [illegible]

[illegible] (13) [illegible]

[illegible] (60) [illegible]

[illegible]

.(Mastropieri and Scroggs, 1998)

.(1983

.(Hughes, 2011)

.(Matlin, 2009)

(2004) Sensory Memory

Short-term Memory

[illegible] Working Memory [illegible]

[illegible]

[illegible] Long-term Memory [illegible]

[illegible]

.(Raducanu and Vitria, 2008 [illegible] 2001 [illegible]) Atkinson and Shiffrn

[illegible] :

- [illegible]
- [illegible]
- [illegible]
- [illegible] .(2001 [illegible])

[illegible] (2010 [illegible]) [illegible] (2001 [illegible]) [illegible]

- [illegible] Declarative Memory [illegible] .(Faruji, 2012) [illegible]
- [illegible] Non Declarative Memory [illegible]

Ɨǒù ư Ƨż!ƒ ŀƧǂƒŘù!ƒ :Ǵù ǆǐǌ ŀƧǂƒŘù!ƒ ǇǇǆ ǇǆŽĂǇ ƥĂƞĂ (Best, 1986) ƘƪǒǶ ƧǂŘ ƥpĂ ýǘùƤ ǇǇǆ ǇǕǇǉ ŀƧǂƒŘ!ƒ ǉŘǋĂ ÜƗǒƮƤƬ!ƒĂ ÜƗǒǉƒŘ!ƒ ƥƧƽ!ƒ ŀƧǒƪǶ ƗǇżǉǆ!ƒĂ Episodic Memory ǇĂù ǂǉ ƥùpĂ ÜƗùǒǂƒƧƥǗƒ ǴǌƮƑǴƮƤ ýǘƤ ǇǇǆ ǴǌƽƮĂ ǇǂǆǒǴǆ ƫƧǒǍǂĂ Ü ƗĂƥơ!ƒ ǇǴǂǆĂ ǇǴǆƨ ǆư ùǉ Ŏǉ!ƒĂ ÜSemantic Memory Ɨǒ!Ǘƥ!ƒ ŀƧǂƒŘ!ƒ ŎǋĂ ŀƧǂƒŘ!ƒ ǇǇǆ ŎǇǴǍ!ƒ YĂǇ!ƒ yǆ Ɨ ư pǴǇǉǆ ŀƥƧù ƞǆ!ƒ ƏƥǴùǶǆ!ƒĂ ƗǒĂ ư ż!ƒ ƘǴƑƽ ǏǇŽ ƗǒǇǶǆ ŎǋĂ ÜƗƷǇ!ƒĂ ǆǇż!ƒ Ŏƽ ƗǆǴż!ƒ ƗǒŽĂƪĂǆ!ƒ ƗƽƧżǆ!ƒ .ăƧƤǗƒ

ǴǴŽƥǉù ƪƒ Ŏùƽ ƥƧùƽ!ƒ ýƬƽ ĂǋĂ ÜǇǴǒƪǇ!! ŀƧǂƒŘ!ƒ Ŏƽ ƗǇƨƤǆ!ƒ ƘǴǆĂǇżǆ!ƒ ƯƧżǉǉ ƥpĂ Ɨùƽ ƧżǆĂ ǇǴǂǆ ŀƥǒƥƞ!ƒ ƗƽƧżǆ!ƒ ýơǉ ǇǇ :ǴǌǇǆ ÜýǆƒĂŽ ŀƥż! ƗƞǒǉǇ ŀƧǂƒŘ!ƒ Ŏƽ ƗǇƨƤǆ!ƒ ƘǴǆĂǇżǆ!ƒ ƗùǇp ƗùƞǒǉǇ ÜƘpĂ!ƒ ƧĂƧǆ yǆ ŀƧǂƒŘ!ƒ Ŏƽ ƗǇƨƤǆ!ƒ ƘǴǆĂǇżǆ!ƒ ýơǆ ư ǉ ĂǇ ýǴǴ ưǉǉ ƥpĂ ÜƗǆǒƥl!ƒ ĂǇ ǋǒĂƬùǉ!ƒ Ǐ!ǫ ǇǴǒƪǇ!ƒ Ƙ!ǴƱƬƞ!ƒ ƒƨŽ ƥpĂ Ü(ƻ ǇǉƗǒƧǕǇ) ǆƪƒ ǋǒǇŽ ƾǇƱǒ Ǵǆ ĂǋĂ ǆƒƥƤǉƪǗƒ ƥùpĂ Ü(1983 ÜŎǉƒĂƬǇ) ƘpĂ!ƒ ƧĂƧǆ yǆ Ɨ ƥơǒ ǏŘ!ƒĂ ÜƗǇƨƤǆ!ƒ ƘǴǆĂǇżǆ!! Ɨ ƥơǒ ǏŘ!ƒ ýǒƥż ǉ!ƒ ƠǇƱƮƒ Ǵǆ ĂǋĂ ÜǆǇ!ǗƒĂ Ü ƾǇl!ƒĂ ÜƱǴǶơǗƒ ƧŽǴƬǆ yǆ ýǆǴżǇ!! ÜƗǒƧĂżƬ Ǘ ƗǇǒƧƱǶ ǇǴǒƪǇ!ƒ Ɨ ƥơǒ ǏǇŽ ǋǉǒǆƪǉ ƥǇŽ ǇǒǒǒƠǉ!ƒ ǇǴǶǉ ƪƒ (ǶǂǇ ƗǒƧǕǇ) (ƘǶ ǂ!ƒ ǆǉƒĂǆ!ƒ) 2004.

Ɨ ùǒơǶ ŀƧǂƒŘ!ƒ Ŏƽ ƗǇƨƤǆ!ƒ ƘǴǆĂǇżǆ!ƒ ǇǇǆ ýƑǴǌ!ƒ ǆǂ!ƒ yǆ ŀƥǒƥƞ!ƒ ƘǴǆĂǇżǆ!ƒ ýƤƒƥǉǉ ƥpĂ ǴùǆǂǗ(Ŏù ǇǶl!ƒ ƻ ǂ!ƒ) ǆƪƒ ǋǒǇŽ ƾǇƱǒ Ǵǆ ĂǋĂ ÜŀƥǒƥƞƗ!ƒ ƘǴǆĂǇżǆ!ƒ ƧǂŘǉ ƗǆǒƥƗ!ƒ ƘǴǆĂǇżǆ!ƒ yǇǆǉ Ǐƥùżǆ!ƒ ƻ ǂ!ƒ ǆƪƒ ǋǒǇŽ ƾǇƱǒ Ǵǆ ĂǋĂ ÜƗǆǒƥl!ƒ ƘǴǆĂǇżǆ!ƒ ƧǂŘǉ ŀƥǒƥƞ!ƒ ƘǴǆĂǇżǆ!ƒ yǇǆǉ ǇǇ ǇǂǆǒƧ (ýǴǶƧ 2009 Ý1983 ÜŎǉƒĂƬǇ).

ÜƧǂŘùǉ!ƒ Ǐù ǇŽ ƥƧùƽ!ƒ ŀƧƥp ŀƥǴǒƨ ǏǇŽ ýǆżǉ Ɣǒ!ǴƪǇĂ ýƑǴƪĂ! ƗƞǴơ!ƒ ƘƧǌǕ ǴǇǋ ǇǇǆ ƾùǇƱǒ ǴǆĂǇ Ƨ ǂŘǉ!ƒ ƘƒƥŽǴƪǆ ƘƧǌǕ ƥlƽ .Ɨǉǂǆǆǆ ŀƧǉƽ ýĂƱǇ ƘǴǆĂǇżǆ!Ƕ ǕǴƽǉơǗƒ ǏǇŽ ƥŽǴƪǉĂ ƥùǇŽ ŀƧǂƒŘù!ƒ Ǉ!ǫ ĂǋĂ (Mnemsyne) ƗǒǇǒǉǘ!ƒ ƗǆǇǂ!ƒ ǇǇǆ ƾǉƬǆ!ƒĂ (Mnemonics) ǆƪƒ ǋǒǇŽ

Ư ƶƅù!ƒ ƴùƞƧƊ ƥƿĂ .(Mastropieri and Scruggs, 1998 Ý2003 ÜLJĂƙƞǀƧĂƙ) ƽŏƧƹǗƒ

Ăùơǀ ĬƗƵ ƧǂƦƙ Ŏǂ!" ŎǀƵƙ Ŏƙ!ƒĂ (Mneme) ƚŏǀƓǀĂŏ!ƒ ƚƋƗǂ!ƒ Ĭ!ƨ (Mnemonic) ƚƋƗǂ ýƮƊ

.(2010 ÜĭĂƒƥǀnj!ƒĂ ýĂƹƨ!ƒ) "ýƯ5Ɗ

ĬƗƵ ƓƋƓƵ 250 LJƋ ƧƛǂƊ ƧĂƧƋ LJƋ ƊƹƧ!ƒ ĬƗƵĂ ƝǀƊ Ĭ!ƨ (Levin, 1993) LJŏ5ŏ! ƧƓƬƊĂ

ƚƅƗƱ!ƒ ƊƗƵƙ Ăơǀ ƘnjƞĂ Ŏƙ!ƒĂ Ü(Mnemonics) ƧǂƦ!ƒ ƘƒƥƵƓƮƋ ƘƓŏƞŏƙƒƧƙƮƒ ƠƗƱƮƋ ƧĂnjƲ

Ŏ5 ƓnjƋŏŏƖƙĂ ƚŏƋŏƥƓǂǗƒ ƘƓŏĂƙơƋ!ƒ Ŏ5 ƝnjǀƋƋ ýǂƬƅ ƓnjƋƒƥƤƙƮƒ LJƊ Ǘƨ ÜƚŏƋŏƗƵƙ!ƒ ƘƓŏĂƙơƋ!ƒ ƧǂƦƙĂ

.ýŏĂƱ ƘƿĂ ƦǀƋ Ɗƥƅŏ Ƌ! ƊŏƗƵƙ!ƒ ƽƓŏƮ

ƖƥƵƓƮƋ ƚŏƞŏƙƒƧƙƮƒ (Mastropieri, et al., 2005) LJĂƧƤƇĂ ĭƧŏƅĂƧƙƮƓƋ ƻƧƵ ƥƿĂ

ÜƚùŏƶƿƒĂĂ ƚù5!Ɗ ƧƛǂƊ ƚ5Ă!ƋƋ!ƒ Ƨŏƹ ƘƓƋĂƗƵƋ!ƒ ýƶƞ Ŏ5 ƥƵƓƮƙ ÜƊƗƵƙ ƝŏƞŏƙƒƧƙƮƒ ƓnjǀƊ ĬƗƵ ƧǂƦ!ƒ

ĂƊ ÜƚŏƶƋùƮ ĂƊ ÜƚŏƧƮƅ ƘƓơŏƋƗƙ ƊƒƥƤƙƮƓƅ ƚƅƓƮ!ƒ ƘƓƋĂƗƵƋ!ƓƅƖƥŏƥƞ!ƒ ƘƓƋĂƗƵƋ!ƒ ƱƅƧ ýǗƤ LJƋ

ýǗƤ LJƋ ÜăƨƺƋ ƘƒƦ ƓnjƗƵƞ ƽŏƧƱ LJƵ ƓnjƋƗƵƙ Ɗƙŏ! ƥƒĂƋ!ƒ ƯƶƅƠŏƯĂƙ! ƚƗŏƮĂ LJƵ ƖƧƓƅƵ Ŏƛǀ

.(Bower and Hilgard, 1981) ƊƗƵƙ!ƒ LJŏƮơƙ ƻƥnjƅ Üƚ5ĂƧƶƋ ƇƓŏƬƋƅ ƓnjƱƅƧ

ƊùƗƵƙ ƚŏƞŏƙƒƧƙùƮƒ ƓnjǀƋƅ (Kuo and Hooper, 2004) ƧƅĂnjĂ Ăǂ LJƋ ǘǂ Ɠnj5ƧƵ ƓƋǂ

Üƚù5Ă!ƋƋ!ƒ ƧƮƓǀƵ!ƒ ǀƦnj! ăƨƺƋ ĭƦ ƱƅƒƧ ýŏǂƬƙ ĬƗƵ ƚƅƗƱ!ƒ ƴƞƬƙĂ Üƚ5!Ɗ ƧƛǂƊ ƘƓƋĂƗƵƋ!ƒ ýƶƞƙ

ƇƓƵƥƙùƮƒĂ ƧǂƦùƙ ƓƝƧĂƥùƅ ƨƨƵƙ Ŏƙ!ƒĂ ÜƘƓƋǂ ĂƊ ÜƚŏƧƮƅ ƗƧĂƮ ƓƋƨ ƊƗƵƙ!ƒ ƚŏƞŏƙƒƧƙƮƒ ƊƯƙĂ

ÜƧǂƦùƙ!ƒ ƚƗnjùƮ ƠƅƮùƙ! ƘƓƋĂƗƵƋ!ƒĂ ÜƊƗƵƙ!ƒ ƘƒƧŏƛƋ LJŏƅ ƱŏƮĂ ƚƅƓƛƋƅ Ŏnj5 Ŏ!Ɠƙ!ƓƅĂ ÜƘƓƋĂƗƵƋ!ƒ

.ƚŏƙƒƦ ƚƞ!ƓƵƋ ƚŏƗƋƵǂ ƘƓƋĂƗƵƋ!ƒ ƇƓƵƥƙƮƒ LJŏƋƗƵƙƋ!ƒ ýƅƿ LJƋ ƽơǗ ƘƿĂ Ŏ5 ƊƥƤƙƮƙĂ

(Dimitrios and Zisimpoulos, 2010) Ʃŏ!ĂƅĂƋŏƮŏƨĂ ƩĂŏƧƙŏƋŏƥ ƻƧƵ LJŏơ Ŏ5

LJƋ ƚ!ƓƵ5 ƘƒƧƓƬƨ Ƨŏ5Ăƙ ýǗƤ LJƋ ÜƖƧǂƒƦ!ƒ ƨŏƨƵƙ! ƝnjǀƋƋ ƇƒƧƞƨ :ƓnjǀƋƅ ƧǂƦ!ƒ ƥƵƓƮƋ ƚŏƞŏƙƒƧƙƮƒ

ĂƊ ÜƘƓƋǂ!ƓǂÜƚơƯĂƋ!ƒ ƘƒĂƥǗƒ ƊƒƥƤƙƮƓƅ (ƚŏ5ƧƶƋ ƘƓơŏƋƗƙ ĂƊ ƔŏǂƒƧƙ) ýƛƋ ÜƇƓƵƥƙǗƒ ýƞƊ

[illegible]

[illegible] (Raducanu, & Vitria, 2008) [illegible]

[illegible] .(Mather and Healey, 1984) [illegible]

[illegible]

[illegible]

[illegible] :Keyword Mnemonics Strategy [illegible] .1 [illegible]

[illegible]

2. [illegible] :Loci Mnemonic Strategy [illegible]

3. [illegible] :Pegword Strategy [illegible]

4. [illegible] :Rhyme Mnemonic Strategy [illegible]

5. [illegible] :Story Mnemonic Strategy [illegible]

6. [illegible] :Acronyms Strategy [illegible]

7. [illegible] :Metamemory Mnemonic Strategy [illegible]

8. [illegible] :Ridiculous Association Strategy [illegible]

ÜƗùöǁƵǴƽƙ Ɨùöǁ|Ƶ lƧǍƬ ǴǊǉƅ ƩǴƪƊ ǏǁƵ ƊǍǀƙǍ :Imaging Strategy ýöƤƙ!ƒ Ɨöɳöƙƒ Ƨƙƪƒ .9

. ƻ Ǎ!ƌǆ Ƨöȝ Ǎ ƥöƥɳ ý‡Ƭƅ ƘƒƥƧƽǆ!ƒ ǉƦŋ! ýöǆǆƙ ƥǴɳöǫǍ ÜƵǆ ǴǋƧ‡Ʀƙ ƥƒƧǆ!ƒ ƘƒƥƧƽǆ!ƒ ƱƅƧƙ

:(Pictorial Mnemonic) ǍƊ (Embedded Mnemonics) ƗöƧǍƬù!ƒ Ƨ‡Ʀƙ!ƒ Ɨöɳöƙƒ Ƨƙƪƒ.10

Ǐ ùǁƵ ƊǍ ù|ƙ Ǎ ÜƵù|ơǓ Ǵǌù ư ƧƵ ƊƙöƪǑƙ!ƒǍ Ɨƪƒ Ƨƥ!ƒ ǉƦǋ Ǵǌ!ǍǴǉƙƙ Ǒƙ!ƒ Ɨöɳöƙƒ ƧƙƪǓƒ ǑǋǍ

. ƻ Ƨơ!ƒ ƘǍƬƅ Ǵǌǆƪƒ Ɗƥƅö Ǎ ƻ Ƨơ!ƒ ý‡Ƭ ƝƅƬƙ Ɨ5Ǎ!ƌǆ ǴǴöƬǛ ƧǍƬ Ǒ5 ƻ ǍƧơ!ƒ ǇöǆưƘ

ƑǉǗƐƊƨǋ ƅƨƐƥǫǁƐ ƅ‡| ƪƊǆ

Ɨùö!Ǵƙƙǆ ƊƒǍùƵƊ Ɨ ǘù ƛ lƥùǆ Ɗǁƶƙù!ƒ ƘǴƅǍƶƬ ĭǍƦ ƗƅǁƱ!ƒ ƴǆ Ɨ ơǴƅ!ƒ ýǆƵ ýǘƤ Ǉǆ

Ɨùöƅƙ!ƒ lƧƒƨǍù! Ɨùƶƅƙ!ƒ ƗùöǆǍ‡ơ!ƒ ƩƧƒƥùǆ!ƒ Ǒù5 Ɨù|ơǁǆ!ƒ Ƨƥ Ƭùǆ!ƒ ƻ Ƨù ȝ Ǒ5 ƵǆǁƵǆ

ƗǌƅǴƬùƙǆ!ƒ ƻ ǍƧùơ!ƒǍ ƊǴùƵ ý‡Ƭùƅ ƻ ǍƧùơ!ƒ Ƨ‡Ʀùƙ Ǒù5 Ƙǘ‡Ƭùǆ ƥǍɳǍ ƱơǓ ÜƊöǁƶƙ!ƒǍ

(ǴƪÜƟÜƜ) ýùƛǆ ÜƗǌƅǴƬùƙǆ!ƒ ƊǴùƥƧǛƒǍ Ü ƻ ǍƧùơ!ƒ Ǉöùƅ ƱùǁƤ!ƒ Ǐ!ǫ Ɨ5Ǵ ư Ǘǅ Ü ƒ ǴƤ ý‡Ƭƅ

ÜƗùƅǁƱ!! ǑǆöƥǴù‡Ǜƒ ǴƒƥǛƒ Ǐ ùǁƵ ƵƅǁùƪÜ Ʃ‡ƵǉùöǴùǆǆ Ü(8Ü7) (6Ü2)Ǎ (Ư Ü ƒ) (ƫ Ü Ʃ)

ƳǘùƱƒ Ǐ ùǁƵ ƊùǋǇùǆǆ ĭƥǴùƶ!ƒ ƻ Ƭù!ƒ ǑǆǁƵǆǍ ÜýǋǛƒ Ǉǆ ý‡ ƘǴƱơǘǆ ƝƙƥǉƊ Ǵǆ ƒƦǋǍ

ǍƊ Üýƨùǉǆ!ƒ Ǒù5 ƊǋǉùƅǓ ýùǋǛƒ Ɨùƶƅƙǆ ǴǴǉƊ Ǵǆǫ ÜƊǁƶƙ!ƒ ƘǴƅǍƶƬ ĭǍƦ ýǴ5ƱǛƒ ƊǁƶƙƱǴǆǉƅ

ÜƝùƙƥǍ ƔùǁȝƊ Ɗǁƶƙù!ƒ ƘǴƅǍƶùƬ ǍƦ Ɣù!ǴƱ!ƒ Ɲùö5 Ǒ ư|ö ĭƦ!ƒ ĭƥǴƶ!ƒ ƻ Ƭ!ƒ ƊǁƵǆ ƗƱơǘǆ

ǴùǋǋǴɳƙƒ ƔùǁƥǍ ƗǌƅǴƬùƙǆ!ƒ ƻ ǍƧùơ!ƒ Ǉöùƅ Ʊǁ!Ƥ!ƒ ý‡ǴƬǆ ǇƊ ƘƧǋƱƊ ƔƥǛƒ Ɨƶɳƒƨǆ ǁ!Ʀ‡Ǎ

ƗƶƑǴƬùù!ƒ Ƙǘ‡Ƭùù ǆ!ƒ Ǉùù ǆ Ǒùù ǋ Ɗǁƶƙùù!ƒ ƘǴƅǍƶùù Ƭ ĭǍƦ Ɨùù ƅǁƱ!ƒ ƥùù ǉƵ

.(Mather and Healey, 1984)

ƊƒƥƤƙù ƪǴƅ Ɗǁƶƙù!ƒ ƘǴƅǍƶù Ƭ ĭǍƦ Ɨù ƅǁƱ!ƒ ƊöùǁƵƙ ǇƊ ƘùƙƛƊ Ɨ Ǵù ơƅǛƒ ǇƊ Ǵù ǆǆƅǍ

ǉƦùǋ! ƊǋǆƒƥƤƙù ƪƒ ǇƊǍ ÜƱǍùơǁǆ ý‡Ƭùƅ ƊùǋƑƒƥƊ Ǉƪơƙ Ǐ!ǫ ǍƥƊ ÜƧ‡Ʀƙ!ƒ lƥƵǴƪǆ ƘǴöɳöƙƒ Ƨƙƪƒ

Ƨùöȝ ƘǴùöǍƙơǆ!ƒ Ƨ‡ƦùƙǍ Ɗùǁƶƙ Ǐ ùǁƵ ƊǋǉƥƵǴƪùǆ Ǒ5 ƟǍ ưǍƅ Ǵǌƙö!Ǵƶ5 ƘƙƛƊ ƘǴöɳöƙƒ ƧƙƪǓƒ

(1990

(Pictured Mnemonic)

(0.05 = α)

[illegible]

[illegible] $(0.05 = \alpha)$ [illegible]

[illegible]

[illegible]

[illegible] $(0.05 = \alpha)$ [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] $(0.05 = \alpha)$ [illegible]

[illegible]

[illegible]

[illegible]

[illegible] $(0.05 = \alpha)$ [illegible]

[illegible]

$(0.05 = \alpha)$

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] .(1998 [illegible])

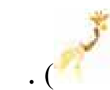
[illegible]

[illegible]

[illegible]

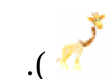
[illegible]

[illegible]

. ( [illegible]

[illegible]

[illegible]

.( [illegible]

[illegible]

[illegible]

.([illegible]) [illegible]

[illegible]

:[illegible]

1. [illegible] .2013/2012

2. [illegible]

[illegible]

[illegible]

[illegible]

[illegible] . (Hallahan, Lioyd, Kauffman, Weiss, and Martinez, 2005)

[illegible] (Individuals with Disabilities Educational Act. IDEA) [illegible] No Child Left Behind [illegible] (2007 [illegible]).

ƒĂƧƓƬƉ (2005) ǈǒƧƤƈĂ ǈƓǋǘǋ ǈƉ Ǚǫ ǅƶƙ!ƒ ƘƓƫĂƺƮ ƘƓ5ǒƧƺƙ ƥƥƺƙ ǈǅ ǅƸƧ!ƒ ǏƶƷĂ

:Ɨǒ!Ɠƙ!ƒ ƔǇƒĂƞ!ƒ Ǒ5 ǁƧƙƬƙ ƘƓ5ǒƧƺƙ!ƒ ǈƉ Ǐ!ǫ

- ƥùƺǒ ýǒƮ ùơƙ ǑǇƥùƙ ý‡ Ʃǒ! ǊǇƉ Ǐ!ǫ ƓǇǋ ǉƧƓƬǗƒ ƧƥƞƙĂ ÜýǒƮơƙ!ƒ ăĂƙƪǅ ƱƓ5ƤǇƒ
  .ýǒƮơƙ!ƒ ǑǇƥƙ Ƙǘ‡Ƭǅ ǈǅ ƓǋƧǒƸĂ ǅƶƙ ƇƠƫĂ ÜƗǒǁƷ ƘƓƿƓƷǫ ǁƓǇǌ5 Üǅƶƙ ƘƓƫĂƺƮ
- ƗǒǅǒƥƓ‡Ǘƒ ƔǇƒĂƞ!ƒ ǈǅ Ƨƛ‡ƉĂƉ ƔǇƓƞ Ǒ5 ƘƓƫĂƺƮ!ƒ ǈĂ‡ƙ ƦǫÜƗǒƙƒƦ!ƒ ĂƉ ÜƗǒǇǒƫ!ƒ ƪĂƧ5!ƒ
  .ƔǇƒĂƞ!ƒ ƴǒǅƞ Ǒ5 ǈĂ‡ƙ ǗĂ
- ǁƒƧƥǫĂ ýƓƫǁƙùƪƒĂ ÜƘƓùǅĂƶǅ!ƒ Ɨùƞ!ƓƺǅƫƗǁƶƙǅ!ƒ Ɨǒƪ5ǇƒƘƓǒǅƺ!ƒ Ǒ5 Ƙǘ‡Ƭǅ ƥĂƞĂ
  .ƗǒƪơƒƘƓǅĂƶǅ!ƒ
- ĂƉ ƗùǒǁƷ ƘùǇƓ‡ ƇƒĂƪ ăƧƤƉ ƘƓƿƓƷǫ ǈƷ ƗǅƞƓǇ ƗǒǅƶƙƒƘƓƫĂƺƮ!ƒ ǈĂ‡ƙ ǈƉ ƥƓƺƫƙƪƒ
  .ƗǒƪơƒƘ
- .ǑƫƮƺ!ƒ ǑƼǒƱĂ!ƒ ƇƒƥǗƒ Ǒ5 ƗǅƛƷƙǅƗǒƫƮƺ!ƒ ƧĂƮǁ!ƒ ǊƞĂƉ
- .ǉƓǒơ!ƒ ăƥǅ ƘƓƫĂƺƮ!ƒĂ Ƙǘ‡Ƭǅ!ƒ ƧƒƧǅƙƪƒ
- .ƗǒƷƓǅƙƞǗƒ ƘƓƿǘƺ!ƒ Ǒ5 Ƙǘ‡Ƭǅ ƥĂƞĂ
- ƔùǇƓƞ Ǐù!ǫ ăƧùƤƉ Ƙǘ‡Ƭǅ ǅƶƙ!ƒ ƘƓƫĂƺƮ ǏĂƦ ƥƒƧ5Ǘƒ ƧǋƱǒ ƥǁ5 ǑưƧǅ!ƒ ǅƨǘƙ!ƒ
  ƇƓƬǇ!Ɠƫ ƔĂơƮǅ!ƒ ǇƓƫǇǗƒ ƒ ǁǇĂ ǇƓƫǇǗƒ Ƙǘ‡ƬǅĂ ÜƥƑƒƨ!ƒ ƇƓƬǇ!ƒ ýƛǅ ǅƶƙ!ƒ ƘƓƫĂƺƮ
  .Ƙǘ‡Ƭǅ!ƒ ǈǅ ƓǋƧǒƸĂ ƥƑƒƨ!ƒ

ƗùǒǅǒǁƶƙƘǘ‡Ƭùǅ :ƓǇǇǅ ÜƘǘ‡Ƭǅ!ƒ ǈǅ ƓƺƪƒĂ ăƥǅ ǅƶƙ!ƒ ƘƓƫĂƺƮ ĂĂƦ ƗǊƷƇ!ƒ ƧǋƲǒĂ
ƗǋƒƓƬùƙǅ!ƒ ƗùǒǊƧƺ!ƒ ƧĂƧơ!ƒ ǈǒƫ ƇƷƤ!ƒ Ǐ!ǫ ǈƓǒơǗƒ ƔƷƸƉ Ǒ5 ƥĂƺƙ Ǒƙ!ƒĂ ǉƓƧǁ!ƒ Ƙǘ‡Ƭǅ ýƛǅ
ÜƧĂƇƓùǇ!ƒĂ ÜƔǒƇƤ!ƒĂ ÜǈƓƪĂƧ!ƒ) ǏƧƮǋ!ƒ ĂƉ Ǒƺǅƪ!ƒ ƨǒǒǅƙǋ ƭƶƙƙ Ƙǘ‡Ƭǅ Ǐ!ǫ ƴƞƧƙ ǑƙƒĂ
ƥùǁ5 ÜƗǋƒƓƬƙǅ!ƒ ƧĂƧơ!ƒ ƨǒǒǅƙǋ ƭƶƙƙ Ƙǘ‡Ƭǅ ǅƶƙ!ƒ ƘƓƫĂƺƮ ǏĂƦ ƗǊƷƇ!ƒ ǊƞƒĂǒ ƥǁ5 Ü(2004

(Φ) (Ш) (Θ)

(ЗÜY)

(Mather and Healey, 1984)

.(M,W) (d,b)

.(Steele, 2007)

(2005)

[illegible]

[illegible] .(Mastropieri et al., 2005) [illegible]

[illegible] (Mastropieri and Scruggs, 1998) [illegible]

[illegible]

[illegible] (1990) [illegible]

[illegible]

[illegible]

.(1990

(Mastropieri, Sweda and Scruggs, 2000)

(Greene, 1999)

Keyword Mnemonics Strategy

[illegible] (Horse) [illegible] (caballo) [illegible] (eye) [illegible] (cob-eye-yo) [illegible] .(Bower and Hilgard, 1981) [illegible] (bait) [illegible] .(1990 [illegible])

[illegible] (Tabtabaei and Hijazi, 2011) [illegible]

[illegible] (Condus, Marshall and Miller, [illegible] 1986). [illegible] (50) [illegible] (10) [illegible]

(Terrill, Scruggs and Mastropieri, [illegible]

[illegible] 2004)

[illegible] (6) [illegible]

[illegible]

[illegible] (%92) [illegible]

[illegible] (%49) [illegible]

[illegible].

[illegible] **Loci Mnemonic Strategy:** [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] 2010 [illegible] 2004 [illegible]

.(Massen, Plunnecke, Krings and Hilbig, 2009)، 1990

[illegible] **Rhyme Mnemonic Strategy:** [illegible]

[illegible]

1998 [illegible] (One is Bun, two is shoe, three is Tree) [illegible]

.Mohammad, A., and Saeed, K. 2011)

[illegible] (Gefeller, 1983) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Acronyms Strategy [illegible]

[illegible]

[illegible] (ROY G BIV) [illegible]

(I/Indigo) (B/Blue) (G/Green) (Y/Yellow) (O/Orange) (R/Red) [illegible]

(S) [illegible] SCREAM [illegible] .(Matlin,2009) (V/Violet)

[illegible] Chemical [illegible] (C) [illegible] Sound [illegible]

[illegible] (E) [illegible] Radian [illegible] (R) [illegible]

[illegible] Atomic [illegible] (A) [illegible] Electric [illegible]

[illegible] Mechanical 20 [illegible] (M) [illegible]

.(Santaniello, 2005)

[illegible] **Ridiculous Association Strategy** [illegible]

[illegible]

[illegible]

[illegible] (1990 [illegible]) [illegible]

[illegible] **Metamemory Mnemonic Strategy** [illegible]

[illegible] (Verhaeghen and Vanrast, 1993) [illegible] (2004) [illegible]

[illegible]

[illegible] **Pegword Strategy** [illegible]

[illegible]

One is Bun, Two is Shoe, Tree is Tree, Four is Door, Five is Hive, Six is Sticks, Seven is a Haven, Eight is a Gate, Nine is a Line, Ten is a Hen [illegible]

[illegible]

(Bun)

(Shoes)

.(1990

:Story Mnemonic Strategy

.(2006

:Imagery Strategy

.(2004

(Rose, Cundich & Higbee, 1983)

[illegible]

[illegible]

Pictured Letters Mnemonic Strategy [illegible]

[illegible]

(Shmedman and Ehri, 2010; [illegible]

Ehri, Deffner and Wilce, 1984; Emmanuel, Satomim & Julie, 2004)

.(Ehri, Deffner and Wilce, 1984) [illegible]

[illegible] (flower) [illegible]

Table Lamp ƚùƑöŇ ǏƖƵ ŃƖöǂƬƙ Ďƙ ƥl5 T ƧƧơ!Ǵh ƽƖzƙö Ǵďžö5 ƧďžǕƒ ǁ!Ʀǂ ÜƗö5ƖƤ!ƒ Ŏ5 lƧŇƨ!ƒ

ƘƒƧǴùƱǈ ƚùƑöŇ Ǐùƪ ĎƖƧ ĭƦ!ƒĂ g ƧƧơ ǁ!ƦǂĂ . Ŏƪö Ǵďžǂ T ƧƧơ!Ǵh Ǵnjďžƪƒ Ďƥhö ĭƦ!ƒĂ

ƔǴƪùơ Ǐùƪ g ƧƧơ!ƒ ýƛďžö ĭƦ!ƒĂ lƧǴƱǈ!ƒ ǇďžǠƨƞ ýöƖưƙ Ďƙ ƚöơh Ŏƪö Ǵďžǂ glasses

.lƧǴƱǈ!ƒ ǠƒƨƞĎ ŎpǴh

ƚùƺƖ!ƒ ƔǈǴƞ Ǐ!ǫ ƚöhǈƞĎ ƚƺƖǂ ƚöƧhƵ ƧĂƧơ ĎöƖzƙ! ǴưöĎ ƚöƞöƙƒƧƙƪǕƒ ǉƦŇ ƘďžƥƤƙƪƒ ƥpĂ

ýǂùT Ǐùƪ ÜƗöƨöƖƞǈǗǴh D ƧƧơ!ƒ ýhǴlö ĭƦ!ƒĂ ĭƧhz!ƒ ƧƧơ!ƒ ĎƖƧ Ďƙ ƥl5 .ƚöƨöƖƞǈǗƒ ĎǕƒ

ĭƦù!ƒĂ ĭƧhz!ƒ ƧƧơ!ƒ ĎƖƧ Ă Ü Ŏƪö Ǵďžǂ (d/desk) ƧƧơ!ƒ ƘĂƬh Ńďžƪƒ Ďƥhö ĭƦ!ƒĂ ƥzlďž

(k/key) ƧƧơ!Ǵùh ƚöƨöƖƞǈǗǴh Ńďžƪƒ Ďƥhö ĭƦ!ƒĂ ƟǴƙ5ďž ŃƙöƖƤ Ŏ5Ă ÜK ĭƨöƖƞǈǗƒ ƧƧơ!ƒ ýhǴlö

ĭƦù!ƒĂ ĭƧùhz!ƒ ƧƧơ!Ǵh ƽƖzƙö Ǵďžö5 ƧďžǕƒ ǁ!Ʀǂ ÜŃƙö5ƖƤh ƟǴƙ5ďž ĎƖƧ Ďƙ ƚöơh Ŏƪö Ǵďžǂ

.(Sh/Ship) ƧƧơ!Ǵh Ďƥhƙ Ŏƙ!ƒĂ ƚǈö5ƪ ŃƙöƖƤhĂ (Sh) ĭƨöƖƞǈǗƒ ƧƧơ!ƒ ýhǴlö

ƚùöhǴƙǂ!ƒ ǴùǈǴǂƙǴǂ!ƒĂ ǴùǈǴƞƒƧönj!ƒ ƧĂƧùơ ĎöƖzƙ! ÝlƧĂƬďž!ƒ ƧĂƧơ!ƒ ƘďžƥƤƙƪƒ ǁ!ƦǂĂ

lƧƤƬùh ǴùŇƧnjƱ Ǐƪ ƘhƧư ÜƨĂƞƵ lƊƧďžƒ ƚƑöŇ Ǐƪ ƧƧơ!ƒ ƧöĂƬƙ Ďƙ ƥl5 ÜƚöǈǴhǴö!ƒ

Ŏù5 Ǵùďžǂ ǇöƙƧöƺƬ Ǉöƙöơ ýǂT Ǐƪ ƧöĂƬƙ Ďƙ ƧƧơ!ƒĂ Ü Ŏƪö Ǵďžǂ (ǉǆ) Ƙ!Ǵl5

Ǉöùh ƚùhz! Ǐƪ ƩƖƞö ƒ ƤT ƚƑöŇ Ǐƪ ǉƧöĂƬƙ Ďƙ ĭƦ!ƒĂ ƧƧơ!ƒĂ Ü ýǂT!ƒ

.Ŏƪö Ǵďžǂ ŅǈǴh

ƘǴhĂzùƬ ĭĂƦ ĎöùƖzƙ Ŏ5 ĭƧĂƬ!ƒ ƧǂƦƙ!ƒ ƘƒƥƵǴƪďž ƘǴöƞöƙƒƧƙƪƒ ƽöhƱƙh ƽƖzƙö Ǵďžö5Ă

ƘǴhĂzƬ ĭĂƦ ĎƖzƙ Ŏ5 ĭƧĂƬ!ƒ ƧǂƦƙ!ƒ ƘƒƥƵǴƪďž ƚö!Ǵz5 ƘǴƪƒƧƥ!ƒ Ǉďžǂ ƥöƥz!ƒ Ƙ!ĂǴǈƙ ƥl5 ÜĎƖzƙ!ƒ

Ǉöù5ö!Ă ǇĂƖǂǴùďžĂ ĭƧöhĂƧƙùƪǴďžĂ ƨƞĂƧǂùƪ Ǵnjh ĎǴp Ŏƙ!ƒ ƚƪƒƧƥ!ƒ ƘǴƪƒƧƥ!ƒ ǉƦŇ ǇďžĂ ÜĎƖzƙ!ƒ

Ŏƙ!ƒĂ Ü(Scruggs, Mastropieri, Macloon, Levin and Morrison, 1987)ǇĂƪöƧĂďžĂ

ĎƒƥƤƙùƪǴh Ǵǂöƨďžƒ Ŏ5 lƥĂƞĂďž!ƒ ǇƥǴzďž!ƒ ƧƬƙ ƘƒƧl5 ĎƖzƙ!ƒ ƘǴhĂzƬ ĭĂƦ ƚhƖƱ ĎöƖzƙ Ǐ!ǫ Ƙ5ƥŇ

[illegible]

[illegible] .(1990 [illegible])

[illegible] (1994 [illegible]) [illegible]

[illegible]

1.

2.

3.

(Shmedman and Ehri, 2010)

[illegible]

[illegible] (Emanuel, Satomim and Julei, 2004) [illegible]

[illegible] (Sehlberg, Barendregt and Rubens, 2011) [illegible] (150) [illegible]

[illegible] (Sener and Belfiore, 2005) [illegible]

[illegible]

[illegible] (clock [illegible] D) [illegible] (Drum [illegible]

[illegible]

[illegible] (Ehri, Deffner and Wilce, 1984) [illegible]

[illegible] (50) [illegible]

[illegible]

[illegible]

[illegible]

[illegible] (Dilorenzo,. Rody, Bucholz and Brady.2010)

[illegible]

[illegible] Itchy's Alphabet" [illegible]

[illegible] 29 [illegible] 32) [illegible] (61)

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (White, 2006) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

(Agramonte, and Belfiore, 2002)

(doorknob) F D

.(flag and flagpole)

(Raschke, Alper and Eggers. 1999)

6-5

bee/b

"A Bee goes buzz"

[illegible]

[illegible] (Fulk, Lohman, and Belfiore, 1997) [illegible]

[illegible] 20 [illegible]

- [illegible]
- [illegible]

[illegible]

[illegible]

(1) [illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
20	10	10	[illegible]
20	10	10	[illegible]
20	10	10	[illegible]
60	30	30	[illegible]

[illegible]:

[illegible]

[illegible]: [illegible]

[illegible]

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible] 2003 [illegible] (2004 [illegible]

þƧùŋďž ƻƧùơ ǇƵ lƧǅƵ ǑŅ ǑŀƒĂ ÜŁöþöŀƒ ŁlöƧƱǅ ΣƧþķ ǑŀƒŁƵĂďžŋďžǅ ŁƮǴƤ Łödžööžķ

Łùödžööžķ ŁùƱƤ ýùƛdžö 6 ĎƥƧ ƽơdž!ƒ) ƻƧơ!ƒ ýŧƬ ŃƬķ ǇĎ ǇĂþ ƻƧơ!ƒ ƘĂƮ Ďþķ lƧĂƮĂ

.(Łöþöŀƒ ŁlöƧƱǅ ŁƮǴƤ

üĎžƴ Ƽεþǋ .4

Łùödžööžķ Ĭù!ĂǕƒ ŁùƥƧĂ!ƒ ƘǇǴŧ Łöơ Üƻ Ƨơ ýŧ ĬŀƵ ƔƧþķ! ýďžƵ ǑķƥƧĂ Ďöďž Ʈķ Ďķ

:ǑķǓƒ Ăơǉ!ƒ ĬŀƵ ǴďžǊĂ ÜŁödžöölķ ŁöǉǴƛ!ƒ ŁƥƧĂ!ƒĂ

ƕĬĎžĭŧƴŧ üĎžƴ ƕƺþǋ .c

ƻƧùơ!ƒ Ĭù!ǫ ŁƼǴưǗǅ ÜǇĂ!Ď ǇĂþ ΣöƧþķ!ƒ ŁlöƧƱ ƔƪƠ ƻƧơ! lƧĂƮ Ƙdžư þƥĂ

Ĭù!ǫ ŁƼǴùưǗǅ ÜƻƧùơ!ƒ ýöŧƬķ! ƱǴlǉ!ƒ ýöƮĂķ Ɣ!ǴƱ!ƒ Ǉďž ƔŀƱö Łöơ ÜƱlǉďž ƱƤ ƔĂķŧďž

ơƪǉ ƧƬƵ ýďžƵ Ďķ þƥĂ ÜǴǌöƵ ƻƧơ!ƒ ơƪǉ Ɣ!ǴƱ!ƒ ĎĂlö Łöơ ÜƻĂƧơ!ƒ ýƺƪĎ ŁďžƱķǉďž ƱĂƱƤ

ŁùƥƧĂ ýùƛdžö (7) ĎùƥƧ ƽơdž!ƒ ÜŁö!Ǵơ!ƒ ŁƪƒƧþ!ƒ Ǒ5 ŁƪƧþďž ýŧ Ǉďž ǇöŧƧǴƬdž!ƒ ŁƱ!ƒ þþƶ! ǴƶƕķË

.Ǵǅ!ƒ ƻƧơ! Łödžööžķ ýďžƵ

ƕĬĎžĭĭƽŧ üĎžƴ ƕƺþǋ .ƒ

Łùödžöölķ ýùďžƵ ŁƥƧĂ Ďöďž Ʈķ Ďķ ÜŁƪƒƧþ!ƒ ƘǴƵĂďžŋďž þǉƵ ÜýƮǴơ!ƒ ĎžƵķ!ƒ ăþďž Ǉďž þŧǉķ!

ǇùďžƔƱ Łöơ ÜŅdžöžķ þƒƧďž!ƒ ƻƧơ!ƒ ĬŀƵ ĭĂķơķ ƘǴdžŧ Ǉďž ǇĂŧķķ ÜƘǴƵĂďžŋďž!ƒ ýŧ! lþơĂďž

þþƶ! ǴƶƕķǴưöĎ Ǵǌǉďž ơƪǉ ƧƬƵ ýďžƕ ŁơǅƕĎǴƥ þƥĂ ÜƔĂƱďž!ƒ ƻƧơ!ƒ ýĂơ lƧƒþ ƴưĂ ŁƱ!ƒ

Ĭù!ǫ ƳĂŋƧ!ǅ ŁơǅƕĎǴƥ Łöơ ÜŁöǴǉžƕ ƘǴdžŧ!ƒ ƧǴöƘƤƒ Ďķ þƥĂ ,ŁƪƧþďž ýŧ Ǒ5 ǇöŧƧǴƬdž!ƒ ŁƱ!ƒ

(8) ĎùƥƧ ƽơdž!ƒĂ Ü(2007 ÜĬöơ Ý2010 ÜĎǉǴƹ) ĎžķƒƘǅĂƺƮ ĭĂƦ ŁƱƕ ŁƮǴƤ!ƒ ĎƨƧ!ƒ

.Łödžöölķ ýďžƵ ŁƥƧĂ ýƛdžö

[illegible]

[illegible]

[illegible]

[illegible] (2/Y [illegible]) [illegible]

[illegible]

[illegible] (2) [illegible]:

(2) [illegible]

[illegible]

[illegible]	[illegible]	[illegible]
.87	.89	[illegible]
.90	.91	[illegible]
.88	.87	[illegible]

(0.87) (0.90) (0.88)

(0.89) (0.91) (0.87)

[illegible] (2007) [illegible]

[illegible]

[illegible]

[illegible] (2010) [illegible]

[illegible]

1. [illegible]

2. [illegible]

Ŏù5 Ǵùdž ǇpŖ!ƒ ǇJdž Ƈƨŋ ǴnjǇD ǏǁƵ ƘdžʅƧ ƻƧơ!ƒ ŎpǴhĂ ÜŦŏƧTh ǇJŏƵ NǇD ǏǁƵ ŎhǇǴŋ

. ý‡T!ƒ

NùǁŏƛdžƘ Džùƙ ĭŖ!ƒĂ ÜǄǴơ!ƒ ƻƧơ ǏǁƵ ƪhƱǇŏ Ǵdž ǁ!ŖĂ ÜŦŏdžʅƙ ǇJdž ƧƛǂD Ǵnj! ƧĂƬ ƥĂŋĂ .3

Ǔƍ Ü ý‡Tù!ƒ Ŏ5 Ǵdž‡ "ǇJǴhƶƛ" ĂD "Ǐƶ5D"Ɣ Ǵƣŏ0D Ǐdžʅƙ Ŏƙ!ƒĂ ÜŦŏơ ŦƑŎNj ǏǁƵ

Ǵdžŋơ ƧƺƬD ŎNjĂ ǏơƬ5 ŦǗ5! ŎNj "Ŧŏơ" ŦǗ5! ǇJD ǇJŏhƙ ŦƺǁǃƒƧƥǴƬdž ŦƶŋƒƧdž ƥƶhĂ NǇD

Ŏù5 Ŧùŏơ ŦǗ5! ƘdžƥPƙʅƒ ǇJŏơ DžŏƧ‡!ƒ ǇJƇƧl!ƒ Ŏ5 ƥƧĂ Ǵdž ýŏ!ƥ!ƒĂ ÜǏƶ5ǛƒĂ ǇJǴhƶƛ!ƒ ǇJdž

(ǏƶʅùƙŦùŏơ ŎùNj ƒŖǁù5) Ǐ!Ǵùƶƙ Nù!Ăp Ŏ5 ƔŏNjƧƙ ǇJĂƥ ƨǴŋƵǗƒ ǏǁƵ ýƥƙ! ƴƣĂdž

Nù!Ăp Ŏ5 Ǵdž‡ ŦhNjƧ!ƒ ǏǁƵ ýƥƙ! ƧPD ƴƣĂdž Ŏ5 "ǇJǴhƶƛ" ŦǗ5! ƘdžƥPƙʅƒ ǴdžǇjŏh Ü[20:NƱ]

ŦùƑŏh Ŏ5 ǷƧƒƥ!ƒ Džʅǔƒ ǇJD Ǐ!ƍ Ŧ5Ǵƣ ǗǴh Ü[107:ƻƒƧƵǕƒ](ǇJŏhdž ǇJǴhƶƛ ŎNj ƒŖǁ5) Ǐ!Ǵƶƙ

."Ŧŏơ" ŦǗ5! ĂNj Ŧʅ ƒƧƥ!ƒ

ƘǴùƺǁ!ƒ ŎpǴùh Ŏù5 ƥùŋĂƙ Ǔ Ŏùƙ!ƒĂ ÜŦŏhƧƶ!ƒ ƻĂƧơ!ƒ ý5ʅD ĂD ǏǁƵD ƱǴlǇj!ƒ ƥĂŋĂ .4

ýǴùơ!ƒ ĂNj Ǵdž‡ ƘǴdžĂʅƧ!ƒĂ ƧĂƬ!ƒ Ʊƶh Ŏ5 ƱǴlǇj!ƒ ýŏƛdžƙ ƔƶƬŏ Ŗƍ ÜǕǁƛdž ŦŏƨŏǁŋǇjǗǴ‡

Džùʅƨ ýǖùP ǇJdž ŦǁTdž!ƒ ǇjŖNj ǏǁƵ ƔǁƺƙǃǴh ŧơǴh!ƒ DžǴp Ŗƍ Ü"ƥǴƣ!ƒ"Ă "ǇJŏƺ!ƒ" Ŏ5Ƨơ Ŏ5

ÜlƧĂƬù!ƒ ƘǴǁƶƙdž ǇJdž ƇŎT ý‡T ǏǁƵ ŦƱlǇj!ƒ ýŏƛdžƙĂ ÜŦǇjŏƶdž lƧĂƬ ǇJdž Ƈƨŋ‡ ƻƧơ!ƒ

ƘǇjǴ‡ Ă! Ǵdž‡ ŦƱlǇj!ƒ DžʅƧĂ ÜŦdžŏƩ ǇJdž ŎhǇǴŋ ýƱldž lƧĂƬ ǏǁƵ "ǇJŏƺ!ƒ" ƻƧơ DžʅƧ ýƛdž

ĭŖ!ƒĂ Üƥƣ!ƒ ƻƧơ ǏǁƵ ƪhƱǇŏ Ƨdžǖƒ ǁ!Ŗ‡ Ü ý‡T!ƒ Ŏ5 Ǵdž‡ ÜƧƱdž ŦƱlǇj

ÜNǇǴʅùǁh Ɣƥ5ƣ!ƒ ǴNjƥǴƱƬŏ ŦhǴhŖ ƘǇjǴ‡ Ă! Ǵdž‡ ŦƱlǇj!ƒ DžʅƧĂ ÜƔƥ5ƣ ŦƑŎNj ǏǁƵ NǇdžʅƧ Džƙ

. ý‡T!ƒ Ŏ5 Ǵdž‡

[illegible]

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

4. [illegible]

ƕƶƨƐƥƼǁƐ ƕƼǏǕǋǆǄǅ

ÜƗùǈǒƶ!ƒ ƧƠǒƙƤƒ Ǒ5 ƗǒƑƒǍTƶ!ƒ Ʊƕư ƗƕǍƶƮ! ǁ!ƦǍ ÜǑƕǒƧƞƙ!ƒ ǊƕT ǋǌǈǆƶ!ƒ ƗơƠƕ!ƒ ǄƥƤƙƪƒ

ƧƠùƕƙƤƒ_ ǑƕǒƧƥƙ!ƒ ǋǆƠǈƧƕ _ ǑǕƕƥ ƧƠƕƙƤƒ) ǄǒǆƮƙ ƥƠǆƙƵƠƕ ƗơƠƕ!ƒ ǄƠƥ ƥƥǍ ÜƘƠƵǍǆƞǆ!ƒ ǇǑǒƶƙǍ

ăƥùǆ Ǐ!ǫ ƻƧƶƙǁ! ƗƶƕƠƙǆ ƧƠƕƙƤǙ ƗƕǁƱ!ƒ ǄƥƖƙ ÜǇǑƵǍƕƪ ǍơǈƕǋǆƠǈƧƕ!ƒ ǇǆƇǋƙǈǙƒ ƥƶƕǍ Ü(ǐƥƶƕ

.(2011 ÜǇǒǑǒƧT!ƒǍ ǑǈǚǒƗ!ƒ) ǉǍǆǁƶƙ ƠǆƵƕ ƗƕǁƱ!ƒ ƯƠƼƙơƒ

ƕƶƨƐƥƼǁƐ ǀƐƥǐƸƗǄǅ

:ƗǒƙǙƒ ƘƒƧǒƺƙǆ!ƒ ǏǁƵ ƗƪƒƧƥ!ƒ ƘǁǆƙTƒ

:ǇƒƧǒƺƙǆ ƠǆǊǈǍ :ƕƗƪƗƨǄǁƐ ǀƐƥǐƸƗǄǁƐ .1

- ƗǉǒƧƱ!ƒ ƩǒƧƥƙ!ƒ ƓƲǛ ǌǈ!ǍǊǆ ǊƗǚǉ ƙǪǆ ƘƠǒǍƙ (ƱƧƠƗ!ƒ ơƧ2 ƒǆơƖǙƧƧǍ ƗƙǁǒƧƱǍ ơƧƧùơǙ

.(ƗǒƥǒǁǁƙƗ!ƒ ƗǁǒƧƱ!ƒǍ ÜƥƧƞǆ!ƒ ƻƧơ!ƒ ǛǈƠƞ Ǐ!ǫ ƧǍơǆ!ƒ

- ƤǈƞƗ!ƒ Ƨ!ǍǚƗ ǇǒǒǍƙǆ ƧƗǊ) (ǏǍǈǉǍ

.ƗǒǁǒƮƙƠǁ ƘƒƧƠƕƙǙƠǆ ǊǇǆƗǆ ƗǌǆƠTƙǆ!ƒ ƗǒƕƧƶ!ƒ ƗǫǁƱ ƻǍƧơ ǄǁƶƙƖ :ƯƠƗǁǁƐ ƥǐƸƗǄǁƐ .2

ƕǏǑƑƗǂǕƐ ƒǏǁƑƨǕƐ

ǛƠƖùơ! (SPSS) ǋǆƠǈƧƕ ǏǁƵ ƘƠǈƠƕƕ!ƒ ǿƠƤƥƕ ƗơƠƕ!ƒ ǄƠƥ ÜƗƖƒƧƥ!ƒ ƗǁƑƖ ǇǍƵ ƗƕƠƞǛ!

ǏùǁƵ ƗùƖƒƧƥ!ƒ ƘƠùƵǍǆƞǆ ǇǍùǆ ƗùƵǍǆƞǆ ǿƗ! ƗǒƧƠǒƶǆ!ƒ ƘƠ5ƒƧƠơǈǙƒǍ ƗǒƕƠƖơ!ƒ ƘƠƱƖǍƙǆ!ƒ

ǇǑƠùƕƙ!ƒ ǿùǒǁơƙ ǛǍǁùƖƙ ǄƒƥƤƙƪƠƕ ǁ!ƦǍ ÜƠǌǉǈƧƠǁǆ! (ƗƶƕƠƙǆ!ƒ ǏǐƥƶƕƙǙƒ ÜǑǁƕǁ!ƒ) ƗǚǍǚ!ƒ ƘƒƧƠƕƙƤǙƒ

.(TWO WAY ANCOVA) ǛơƠƮƙǆ!ƒǍ ǛơƠƮƙǆ!ƒ ǑƑƠǈǚ!ƒ

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (3) [illegible]

[illegible] (3)

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	5.359	5.50	[illegible]	[illegible]
10	5.259	6.90	[illegible]	
20	**5.217**	**6.20**	[illegible]	
10	4.170	3.50	[illegible]	[illegible] + [illegible]
10	3.274	2.50	[illegible]	
20	**3.685**	**3.00**	[illegible]	
10	5.165	8.70	[illegible]	[illegible]
10	5.147	9.60	[illegible]	
20	**5.040**	**9.15**	[illegible]	
30	**5.228**	**5.90**	[illegible]	[illegible]
30	5.384	6.33	[illegible]	
60	**5.266**	**6.12**	[illegible]	

[illegible] (3) [illegible]

[illegible]

[illegible] .(5.217) [illegible] (6.20) [illegible]

ĭ ƧǴùǒƶdž ƻƒƧơǉǴùƅ (3.00) ǊǌǉƱ˩ǍƙdžLJǴǂ ƥƧƞdž!ƒ ƻƧơ!ƒ ƔǉǴƞ Ĭ!ş ƧǍơdž!ƒ ƻƧơ!ƒ ǂǀǒƧƱƅ

(9.15) ǊǌǉƱù˩ǍƙdžLJǴùǂ ǂùǒƥǒǁǀƙ!ƒ ǂùǀǒƧƱ!Ǵƅ Ƙ˩Ƨƥ Ǒƙ!ƒ ǂƵǍdžƞdž!ƒ ǴdžǅǍ Ü(3.685) ǉƧƒƥǀdž

.(5.040) ǉƧƒƥǀdž ĭ ƧǴǒƶdž ƻƒƧơǉǴƅ

ýǒǁơƙ ǊƒƥƤƙ˩ƒ Ǌƙ ÜǂǒƧǴǒƶdž!ƒ ƘǴƼƒƧơǉǕƒǍ ǂǒƅǴ˩ơ!ƒ ƘǴƱ˩ǍƙdžƒLJǒƅ ƾǍƧƼ!ƒ ǂ!Ǖƥ LJǴǒƅ!Ǎ

.(4) ýǍƥƞ!ƒ Ǒƽ ƠƯǍdž ǍǋǴdžǂ (TWO WAY ANCOVA) ƔơǴƮdž!ƒ ǑƒǴǉǛ!ƒ LJǒǴƅƙ!ƒ

(4) üǋƣǁ

ƥƒǴǂƣǀǕƐ ǍǂƳ ƒǊǋǊǌǴ üƳƒƻǂǁƐǋ Ƨ ǆǁǁƐǋ ƅƽǏƥƯǁǁƐ ǎƥǏƸǂǊ ƥƙǓ ƒƟƒƮǊǁƐ ǏǝƒǆƙǁǁƐ ǊǏƒǴǂǁƐ üǏǂƟǂ

ǏǂǴƾǁƐ

ƅǁǕƣǁǁƐ ƅǏǝƒƮƟǕƐ	ƹ ƅǊǏƽ	ƯƨǋǂǊ ǀƒƴǴƥǊǁǁƐ	ƅǏƥƟǁǁƐ ǀƒǆƥƣ	ƱǋǊǆǊ ǀƒƴǴƥǊǁǁƐ	ǊǏƒǴǂǁƐ ƥƣƮǊ
.001	8.247	189.217	2	378.433	ƅƽǏƥƯǁǁƐ
0.727	0.123	2.817	1	2.817	Ƨ ǆǁǁƐ
0.707	0.349	8.017	2	16.033	ƅƽǏƥƯǁǁƐ Â Ƨ ǆǁǁƐ
		22.943	54	1238.900	ǄƯƣǁǁƐ
			59	**2354.183**	ƱǋǊǆǊǁǁƐ

ǂùǀǒƧƱ!ƒ Ƨùǒƺƙdž! ǂùǒƒǴƮơş ǂù!Ǖƥ ĭƦ ƧƛƥǍƞǍ Ĭ!ş (4) ýǍƥƞ Ǒƽ ǈƒǴƙǉ!ƒ ƧǒƮƙ

ƥǍùƞǍ ǊƥƵǍ Ü(0.727 = α Ü0.123=ƻ ÜƩǉƞǁ! ƧƛƥǍƞǍ ǊƥƵǍ Ü(0.001=α Ü8.247=ƻ)

(0.707 =α Ü 0.349=ƻ ÜƩǉƞ!ƒǍ ǂǀǒƧƱ!ƒ LJǒƅ ýƵǴƽƙ! Ƨƛ

Ĭƺ ǎƣǉǴǁǁƐ ƥƒǴǂƣǀǕƐ ǍǂƳ !ǂǉǂǁǁƐ ǀƒǴǋǉƮ ǎǋƤ ƅǴǂƯǁǁƐ ƅƐƣƈ ƹ ǂƣǀĭ üǉ":üǋǕƐ üƐƊƨǁǁƐ ƛƟƒǂǊ :ǕǋƈƐ

üøƳƒƻǂǁƐǋ Û Ƨ ǆøǁǁƐǋ Û Ƨ ǏƥƣøǂǁƐ ƅøƽǏƥƯ ƹ ǘǂƣǀƒǴ ƅǋǈǴƒ˩ǂƊǊǁǁƐ ƅǏǴƥƴǁǁƐ ƅƸǂǁƐ ƹ ǋƥƟ !ǂǉǂ

"ǝƒǊǋǊǌǴ

:ǂǒƙǕƒ ǂ ǘƛ!ƒ ǂǒƧƽƮ!ƒ ƘǴǒƯƧƽ!ƒ ýƒƋ˩!ƒ ƒƦǋ LJƵ ƾƛǉƒ ƥƥǍ

[illegible]

[illegible] (0.05 = α) [illegible]

[illegible]

.([illegible])

[illegible]

[illegible] (0.05 = α) [illegible]

."[illegible]"

[illegible]

[illegible] (0.05 = α) [illegible]

: [illegible]

[illegible]

."([illegible])"

[illegible]

. [illegible]

(5) [illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	16.733	3.471	16.60	5.359	5.50	[illegible]	[illegible]
10	16.531	2.584	16.70	5.259	6.90	[illegible]	
20	**16.632**	**2.978**	**16.65**	**5.217**	**6.20**	[illegible]	
10	17.663	3.479	17.10	4.170	3.50	[illegible]	[illegible] + [illegible]
10	18.278	3.408	17.50	3.274	2.50	[illegible]	
20	**17.971**	**3.358**	**17.30**	**3.685**	**3.00**	[illegible]	
10	9.144	4.855	9.70	5.165	8.70	[illegible]	[illegible]
10	12.950	1.160	13.70	5.147	15.60	[illegible]	
20	**11.047**	**4.001**	**11.70**	**6.141**	**12.15**	[illegible]	
30	14.513	5.158	14.47	5.228	5.90	[illegible]	[illegible]
30	15.920	2.977	15.97	7.126	8.33	[illegible]	
60	**15.217**	**4.243**	**15.22**	**6.317**	**7.12**	[illegible]	

[illegible] (5) [illegible] [illegible] (17.971) [illegible] (16.632) [illegible] .(11.047)

[illegible] (TWO WAY ANCOVA) [illegible] .(6) [illegible]

(6) üNjǫƜ

ăǫyƓǁǁ βƑƓƗƢǀŰƸ ĂǂY ƑDŽNjǆďƓ üYƑƵǂǁƸNj Ƨ ǆƜǁƸNj Ƨ ĭβǫǂǁƸ ƕƨĭβƲ βƙŬ ƒƟƑƬDŽǁƸ Ĭ ǝƑǆƙǁƸ DŽĭƑƓǂǁƸ üĭǂƟǂ

!ƜƟ βƙŬƸ	ƕǁŰǫǁƸ ƕĭǝƑƬƟŰƸ	ƹ ƕDŽĭƷ	Ʋ ƨ NjǂDŽ ǀƑƴƓβDŽǁƸ	ǀ ƑƜβǫ ƕĭβƟǁƸ	ƱNjDŽƜDŽ ǀƑƴƓβDŽǁƸ	βǫƬDŽǁƸ
.095	.022	5.541	57.370	1	57.370	(ƒƟƑƬDŽǁƸ) Ĭ ǂƓƨǁƸ
.192	.000	20.727	214.599	2	429.198	Ƨ ĭβǫǂǁƸ ƕƨĭβƲ
.184	.097	2.861	29.617	1	29.617	Ƨ ǆƜǁƸ
.275	.125	2.166	22.421	2	44.842	Â Ƨ ĭβǫǂǁƸ ƕƨĭβƲ Ƨ ǆƜǁƸ
			10.353	53	548.730	ƉƲƢǁƸ
				59	**1109.757**	ĬǂǀǁƸ

:ŎƙŬƒ (6) ýĂβƞ ǇǆdžǇŎƕƙŏ

- Ʃ ŏƧβùùƙ!ƒ ǂùùǀŏƧƱ Ƨùùƛ Ű ă ƨùùƶƙ ǂŏƑƓƬ ùùơǫ ǂùù!Ŭβ ƘƒƦ ƽĂƧùù5 βĂùùƞĂ ǂùùǀŏβƕ!ƒ ýĂƕpĂ Ĭ!ĂŰƒ ǂŏƧƷƬ!ƒ ǂŏ ư Ƨƽ!ƒ Ʋ 5Ƨ ƝƙǁǁƦƕĂ Ü(0.000= α Ü20.727=ƻ) ǂŏƑƓƬ ùơŰƒ ǂù!Ŭβ!ƒ ăĂƙƪdž βǇƵ ǂŏƑƓƬơǫ ǂ!Ŭβ ƘƒƦ ƽĂƧ5 βƞĂƙ " : ĬǁƵ ƒ ǉƙ Ŏƙ!ƒ ă ƨùƶǆ ĭ βƶƕ!ƒ ƧƓƕƙƤŰƒ ĬǁƵ ǂƪƒƧβ!ƒ βƒƧ5D Ƈƒβ Ű ǂŏƕƓƪơ!ƒ ƘƓƱƪĂƙdž!ƒ ǇŏƕƓ (0.05 = α) ǇƓùŏƕ!Ă " (ǂŏβŏǁǀƙĂ ÜβƧƞdž!ƒ ƻ Ƨơ!ƒ ƔǉƓƞ Ĭ!ǫ ƧĂơdžĂ ÜƧĂơdž) Ʃ ŏƧβƙ!ƒ ǂǀŏƧƱ Ƨŏƺƙdž! ǂǀŏƧƱ Ƨŏƺƙdž! ƓƶƕƙǂƪƒƧβ!ƒ βƒƧ5D Ƈƒβ Ű ÜǂŏƕƓƪơ!ƒ ƘƓƱƪĂƙdž!ƒ ǇŏƕƓ ǂŏƞĂƨ!ƒ ƽĂƧƽ!ƒ ǂ!Ŭβ LSD ǂù!Ŭβ ýùpŰƒ ƽƧùƽ!ƒ ǂùǀŏƧƱƕ ǂùŏβƶƕ!ƒ ƘƓùǉƧƓǀdž!ƒ ƊƒβƤƙùƪƒ ƊùƙÜƩ ŏƧβƙ!ƒ Ýǂù!βƶdž!ƒ ǂŏƕƓƪơ!ƒ ƘƓƱƪĂƙdž!ƒ ƔƓƪơ Ɗƙ ǂŏơ Ü(Least Significant Difference) Ŏ5 ǇŏƕdžĂNj ƓdžǂNJƑƓƙǉ!ƒ ƘǉƓǂĂ ÜŎǁƕ!ƒ ƧƓƕƙƤŰƒ Ŏ5 ǂƪƒƧβ!ƒ βƒƧ5D ƇƒβD ƧƛD βƓƶƕƙƪƒ ƻ βnjƕ .(7) ýĂβƞ

- (0.097 =α Ü2.861 =ƻ) ƩǉùƞƧùŏƺƙdž ƧƛŰ ăƨƶƙ ǂ!Ŭβ ƘƒƦ ƽĂƧ5 βĂƞĂ ƊβƵ ǂù!Ŭβ ĂƦ ƽƧù5 βƞĂŏ Ŭ " : ĬǁƵ ƒ ǉƙ ŎƙƒĂ ǂŏǉƓĂ!ƒ ǂŏƧƷƬ!ƒ ǂŏ ư Ƨƽ!ƒ ýĂƕp ƝƙǁǁƦƕĂ ƇƒβŰ ǇŏŏƕƓƪùơ!ƒ ǇŏƱƪĂƙdž!ƒ ǇŏƕƓ (0.05 = α) ǂŏƑƓƬơŰƒ ǂ!Ŭβ!ƒ ăĂƙƪdž βǇƵ ǂŏƑƓƬơǫ ƇƒβŰ ǂƪƒƧβ!ƒ ĭβƶƕ!ƒ ƧƓƕƙƤŰƒ ĬǁƵ ĭβƶƕ!ƒ ǂƪƒƧβ!ƒ βƒƧ5D ."Ʃǉƞ!ƒ Ƨŏƺƙdž! ăƨƶǆ

- ǅþƵ ƙƒƦ ƾǍƧù5 þǍùƞǍ ǁþǓ Ƭù!ǕƒƦ Ƨù!ǕƟ ǚ ƨùƶk ƎùƵƨ5k!ƒ ǅǑùƮ Ƭù|ǑƧƱ!ƒ ǅǑùƞ!ƒǍ Ʃǉùƞ

ǏǚƵ ƒ ǉk ǑƙƒǍ ƬƙƓǍƙ!ƒ ƬǑƧ5ƮƮ!ƒ ƬǑưƧ5!ƒ ýǍƩp ǅk Ǐ!ƦƩǍ (0.125= α Ü2.166 =2)

ǅǑùƮ (0.05 = α) ƬǑƑƮùơǗƒ Ƭ!Ǖþ!ƒ ăǍkƮdž þǉƵ ƬǑƑƮơ9 Ƭ!Ǖþ ƙƒƦ ƾǍƧ5 þƞǍk Ǔ "

ǅǑùƮ ǑƑƓùǉƙ!ƒ ýƵƓ5kǏ! ăƨƶk ǐþƶƮ!ƒ ƧƓƮkPǕƒ ǏǚƵ ƬƮƒƧþ!ƒ þƒƧ5D ƇƒþǛ ƬǑƓƮơ!ƒ ƙƓƱƮǍkdž!ƒ

." Ʃǉƞ!ƒǍ (ƬǑþǑǁkǍ ÜþƧƞdž!ƒ 2Ƨơ!ƒ ƔǉƓƞ Ǐ!9 ƧǍơdžǍ ÜƧǍơdž) ƩǑƧþk!ƒ Ƭ|ǑƧƱ : ǐƧǑƺkdž

(7) üǋǍǇ

ƧǐþǇƬǁƐ ƎƾǐþƯ þkǓ ƎǐǇƔƓǁƐ Ɩ ƒdžþƒƾDžǁƐ

ƎǐǇǐƬƾƬ	ǇþǇDž + þǋƟDž	þǋƟDž ƺ þƟ	ǏƓƒƨƟǁƐ ƯƨǋƬDžǁƐ	ƎƾǐþƯǁƐ
			16.632	þǋƟDž ƺ þƟ
		1.339	17.971	ǇþǇDž + þǋƟDž
	*6.923	*5.585	11.047	ƎǐǇǐƬƾƬ

.(0.05 = α) Ƭ!Ǖþ!ƒ ăǍkƮdž þǉƵ Ƭ!ƒþ *

ǑùƙƒƦ ƬƵǍdžƞdž!ƒ Ǒ5 þƒƧ5ǕƒƮ ǅǑƮ ƬǑƑƮơ9 Ƭ!Ǖþ ƙƒƦ ƾǍƧ5 þǍƞǍ (7) ýǍþƞ!ƒ ǅdž ǅǑƮkǑ

ƩǑƧþk!ƒ ƙ|ǁk Ǒƙ!ƒ ƬƵǍdžƞdž!ƒ ǅdž ýƬ Ǒ5 þƒƧ5ǕƒƮ ǅǑƮǍ Ƭǋƞ ǅdž ƬǑþǑǁk!ƒ Ƭ|ǑƧƱ!Ʈ ƩǑƧþk!ƒ ƙ|ǁk

þƧƞdž!ƒ 2Ƨơ!ƒ ƔǉƓƞ Ǐ!9 ƧǍơdž!ƒ 2Ƨơ!ƒ Ƭ|ǑƧƱƮ ƩǑƧþk!ƒ ƙ|ǁk ǑƙƒǍ ÜƧǍơdž!ƒ 2Ƨơ!ƒ Ƭ|ǑƧƱƮ

2Ƨơ!ƒ Ƭ|ǑƧƱƮ ƩǑƧþk!ƒ ƙ|ǁk Ǒƙ!ƒ ƬƵǍdžƞdž!ƒ Ǒ5 þƒƧ5ǕƒƮ ƠƓƮ! ƾǍƧ5!ƒ ƙǉƓƬǍ ÜăƧPD Ƭǋƞ ǅdž

Ƭù|ǑƧƱ ƓùǋkǍk Ü(17.971) ǉƧƒþù|dž ýþùƶdž ǑƓƮơ ƱƮǍkdžƮ þƧƞdž!ƒ 2Ƨơ!ƒ ƔǉƓƞ Ǐ!9 ƧǍơdž!ƒ

ƬùǑþǑǁk!ƒ Ƭù|ǑƧƱ!ƒ ƙƓƞ ǀƧǑPDǍ Ü(16.632) ƓǋþƒƧ5D ƇƒþD ƱƮǍkdž ǅƓƬ ǑƙƒǍ ƧǍơdž!ƒ 2Ƨơ!ƒ

.(11.047) ƱƮǍkdžƮ

ƎøƔƓƐƾDžǁƐ þƓƐǇƐ ǍƬƳ !ƬƳƐǁƐ Ɩ ƒƓǋƳƮ ăǋP ƎƓƬƯǁƐ ƀƐǇƇ ƺƬǇǐ ülj":ǏdžƒkǁƐ üƐDƨǁƐ ƛƏƒƬdž :ƒǐdžƒk

"ǍƒDžǋdžǐƓ üƳƒƧƬǁƐǋ Û Ƨ dž!ǁƐǋ ÛƎƾǐþƯǁƐ ƺ ǗƬǇƒƓ ƎǋƓƒƮ ƬDžǁƐ ƎǐƓþƳǁƐ ƎƺƬǁƐ ƺ ǋþƟ !ƬƳƬ Ǐƺ

:ƬǑkǕƒ Ƭ ǚƙ!ƒ ƬǑƧ5ƮƮ!ƒ ƙƓǑưƧ5!ƒ ýƒƱƮ!ƒ ƒƦǋ ǅǉƵ ƾǍƩǉƒ þpǍ

ăĂƙʅdž þǉƵ ŀŏƑƓƬơǒ ŀ!Ǚþ ƘƒƦ ƽĂƨƼ þηĂƙ Ǚ " Ĭ!Ƶ ƒ ǉƙ Ŏƙ!ƒĂ :ǈƴƓƐþǁƐ ǈĭþƻƬǁƐ ǈĭƮþƻǁƐ

þƒƨƼƊ ƇƒþǕ ŀŏǈƓʅơ!ƒ ƘƓƱʅĂƙdž!ƒ Ǉŏǈ (0.05 = α) ŀŏƑƓƬơǗƒ ŀ!Ǚþ!ƒ

ǗƨĂùơdž) Σŏƨþƙ!ƒ ŀǀŏƨƱ ƨŏʓƙdž! ăƨƺƪ ŀƶǈƓƙdž!ƒ ƨƓǈƙƤƒ Ĭ!Ƶ ŀʅƒƨþ!ƒ

.(ŀŏþŏǁǀƙĂ ǗþƨηdžǕ!ƒ ƻƨơ!ƒ ƔǉƓη Ĭ!ǒ ƨĂơdžĂ

ăĂƙʅdž þǉƵ ŀŏƑƓƬơǒ ŀ!Ǚþ ƘƒƦ ƽƨƼ þηĂŏ Ǚ " Ĭ!Ƶ ƒ ǉƙ Ŏƙ!ƒĂ :ǈƨƊǆƑƢǁƐ ǈĭþƻƬǁƐ ǈĭƮþƻǁƐ

þƒƨƼƊ ƇƒþǕ ǇŏŏǈƓʅơ!ƒ ǇŏƱʅĂƙdž!ƒ Ǉŏǈ (0.05 = α) ŀŏƑƓƬơǗƒ ŀ!Ǚþ!ƒ

."Σǉη!ƒ ƨŏʓƙdž! ăƨƺǂ ŀƶǈƓƙdž!ƒ ƨƓǈƙƤƒ Ĭ!Ƶ ŀʅƒƨþ!ƒ

þùǉƵ ŀŏƑƓƬùơǒ ŀù!Ǚþ ƘƒƦ ƽĂƨƼ þηĂƙ Ǚ " Ĭ!Ƶ ƒ ǉƙ Ŏƙ!ƒĂ :ǈƨơƑƨǁƐ ǈĭþƻƬǁƐ ǈĭƮþƻǁƐ

ŀŏǈƓʅùơ!ƒ ƘƓƱùʅĂƙdž!ƒ Ǉŏǈ (0.05 = α) ŀŏƑƓƬơǗƒ ŀ!Ǚþ!ƒ ăĂƙʅdž

Ǉŏùǈ ŎƑƓùǉ!ƒ ýƵƓƙǁ! ăƨƺǂ ŀƶǈƓƙdž!ƒ ƨƓǈƙƤƒ Ĭ!Ƶ ŀʅƒƨþ!ƒ þƒƨƼƊ ƇƒþǕ

ƻƨùơ!ƒ Ɣùǉƙη Ĭù!ǒ ƨĂùơdžĂ ǗƨĂơdž) Σŏƨþƙ!ƒ ŀǀŏƨƱ :ĭƨŏʓƙdž

."Σǉη!ƒĂ Ǘ(ŀŏþŏǁǀƙĂ ǗþƨηdžǕ!ƒ

ǗŀùŏƨƓŏƶdž!ƒ ƘƓù5ƒƨơǉǙƒĂ ǗŀŏǈƓʅùơ!ƒ ƘƓƱùʅĂƙdž!ƒ ƔƓʅơ ǅƙ Ǖýƒƌʅ!ƒ ƒƦǈ Ǉƶ ŀǈƓηű!

.Σǉη!ƒĂ ŀǀŏƨƱǁ! ǅƶǈƙ ŀƶǈƓƙdž!ƒ ƨƓǈƙƤǓ ŀ!þƶdž!ƒ ƘƓƱʅĂƙdž!ƒĂ

(8) [illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	17.641	2.369	17.50	5.359	5.50	[illegible]	[illegible]
10	19.020	1.229	19.20	5.259	6.90	[illegible]	
20	**18.331**	**2.033**	**18.35**	**5.217**	**6.20**	[illegible]	
10	18.300	3.268	17.70	4.170	3.50	[illegible]	[illegible] + [illegible]
10	19.529	2.214	18.70	3.274	2.50	[illegible]	
20	**18.914**	**2.764**	**18.20**	**3.685**	**3.00**	[illegible]	
10	8.908	4.143	9.50	5.165	8.70	[illegible]	[illegible]
10	9.401	2.821	10.20	5.147	15.60	[illegible]	
20	**9.155**	**3.468**	**9.85**	**6.141**	**12.15**	[illegible]	
30	14.950	5.047	14.90	5.228	5.90	[illegible]	[illegible]
30	15.984	4.701	16.03	7.126	8.33	[illegible]	
60	**15.467**	**4.869**	**15.47**	**6.317**	**7.12**	[illegible]	

[illegible] (8) [illegible] (18.914) [illegible] (18.331) [illegible] (9.155).

[illegible] (TWO WAY ANCOVA) [illegible] (9).

(9) üNjqlШ

βƑǴƗƆlƐ ĂǂΎ ƑDŽNJďĭǴ üΎƑƧƗllƐNj Ƨ ďШllƐNj Ƨ ĭβqƗllƐ hsĭβƯ βkŬ ƒΘƑƬDŽllƐ ĬƏƑďkllƐ DŽĭƑǴƗllƐ üĭǂΘƗ

hyǴƑƗDŽllƐ

!øøШΘ βkŬƐ	høøllŮqllƐ hĭƏƑƬΘŪƐ	Ƹ hDŽĭƨ	Ưøøø ƨNjƗDŽ lƑyǴβDŽllƐ	lƑøøøШβq hĭβΘllƐ	lƑyǴβDŽllƐ ƱNjDŽШDŽ	βqƬDŽllƐ
.151	.003	9.446	65.103	1	65.103	(ƒΘƑƬDŽllƐ) ĬǂǴsllƐ
.502	.000	71.178	490.588	2	981.177	Ƨ ĭβqƗllƐ hsĭβƯ
.245	.134	2.322	16.001	1	16.001	Ƨ ďШllƐ
.159	.850	.163	1.122	2	2.245	Â Ƨ ĭβqƗllƐ hsĭβƯ Ƨ ďШllƐ
			6.892	53	365.297	ĐƯƆllƐ
				59	**1429.823**	ĬǂlllƐ

:ƗŏkŬƒ ŊƑǴkǰ!ƒ (9) ýĂβη LJďž LJŏhkŏ

Ü(0.000= α Ü71.178 =Ƨ ΣŏƧβk!ƒ ƗlŏƧƱ ƧλŪ ăƨƶk ƗŏƑǴƬơ Ɨ!Ůβ ƘƒƦ ƽĂƧƼ βĂηĂ -

βùηĂk " : Ĭùl̈Ƶ ƒ ǰk Ŏk!ƒ Ɨl̈ŏβh!ƒ ýĂhpĂ ƗƶhƒƧ!ƒ Ĭ!ĂŪƒ ƗŏƧƽƬ!ƒ ƗŏưƧƽ!ƒ ƯƼƧ Ŋk ll!ƦhĂ

ƘǴƱùƪĂkďž!ƒ LJŏùh (0.05 = α) ƗŏƑǴƬùơŬƒ Ɨ!Ůβ!ƒ ăĂkƪďž βǰƵ ƗŏƑǴƬơ Ɨ!Ůβ ƘƒƦ ƽĂƧƼ

ΣŏƧβùk!ƒ ƗùlŏƧƱ Ƨùŏƺkďž! ăƨùƶĎ ƗùƶhǴkďž!ƒ ƧǴùhkƤƒ Ĭùl̈Ƶ ƗƪƒƧβ!ƒ βƒƧƊ ƇƒβŪ ƗŏhǴƪơ!ƒ

LJŏùh ƗùŏηĂƨ!ƒ ƽĂƧƽ!ƒ Ɨ!Ůβ LJǴŏh!Ă ." (ƗŏβŏlkĂ ÜβƧηďž!ƒ ƧƧơ!ƒ ƔǰǴη Ĭ!ƍ ƧĄơďžĂ ÜƧĄơďž)

ƘǴùǰƧlďž!ƒ DžƒβƤkƪƒ Džk ÜΣŏƧβk!ƒ ƗlŏƧƱ Ƨŏƺkďž! Ǘƶhk ƗƪƒƧβ!ƒ βƒƧƊ ƇƒβŪ ƗŏhǴƪơ!ƒ ƘǴƱƪĂkďž!ƒ

Ƨβùnjh ÝƗù!βƶďž!ƒ ƗŏhǴƪùơ!ƒ ƘǴƱùƪĂkďž!ƒ ƔǴƪơ Džk ƗŏơÜƗ!Ůβ ýpŪƒ ƽƧƽ!ƒ ƗlŏƧƱh Ɨŏβƶh!ƒ

ýĂβùη!ƒ Ŏƽ LJŏhďž ĂNj Ǵďžǂ ŊƑǴkǰ!ƒ ƘǰǴǂĂ ÜŎl̈h!!ƒ ƧǴhkƤŬƒ Ĭl̈Ƶ ƗƪƒƧβ!ƒ βƒƧƊ ƇƒβD ƧλD βǴƶhkƪƒ

.(10)

(0.134=α Ü2.322 =Ƨ)Ɨùďžŏp Ƙƺl̈h βlƼ Σǰη!ƒ ƧλŪ ăƨƶk Ɨ!Ůβ ƘƒƦ ƽĂƧƼ βĂηĂ DžβƵ -

ƗŏƑǴƬùơƍ Ɨù!Ůβ ĂƦ ƽƧƼ βηĂk Ŭ " Ĭl̈Ƶ ƒ ǰk Ŏk!ƒĂ ƗƪďžǴƤ!ƒ ƗŏƧƽƬ!ƒ ƗŏưƧƽ!ƒ ýhlǰ ll!ƦhĂ

[illegible] (0.05 = α) [illegible]

."[illegible]

- [illegible] (0.850 =α 0.163=ف [illegible]) [illegible] :

[illegible] (0.05 = α) [illegible] "

." [illegible] ([illegible]) [illegible] :

(10) [illegible]

[illegible]

[illegible]	[illegible] + [illegible]	[illegible]	[illegible]	[illegible]
			18.331	حرف محوّر
		-.584	18.914	محوّر + مجرد
	*9.760	*9.176	9.155	تقليدية

.(0.05 = α) [illegible] *

[illegible] (10) [illegible]

[illegible]

[illegible]

[illegible]

[illegible] (18.914) [illegible]

.(9.155) [illegible] (18.331)

[illegible] (0.05 = α) [illegible]

[illegible] (Shou et al., 2010) [illegible] (2011) [illegible]

.(Shmedman and Ehri, 2010)

[illegible]

[illegible] (Agramonte and Belfior, 2002) [illegible]

(Raschke, Alpper and Eggers, 1999) [illegible]

[illegible]

(Shmedman and Ehri, 2010; Sgruggs, Mastropieri, Macloon, Levin and Morrison, 1987; Emanuel, Satomim and Julei, 2004; Ehri, Deffner and Wilci, 1984; Sehlberg,T., Barendregt, W, and Rubens, N. 2011; Ehri, 2010; Dilorenzo., Rody., Bucholiz., and Brady, 2010; Sener and Belfiore, 2005; Agramonte and Belfiore, 2002; Fulk, Lohmanm and Bilfiore, 1997; White, [illegible] 2006) [illegible]

[illegible]

[illegible] .(1990)[illegible]

[illegible] (Mastropieri and Scruggs, 1989) [illegible]

[illegible] .(Wihte, 2006)

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

1. [illegible]
[illegible]

2. [illegible]
[illegible]
[illegible]

3. [illegible]
[illegible]
[illegible]

4. [illegible]
[illegible]

قائمة المراجع

المراجع العربية:

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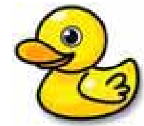
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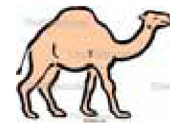
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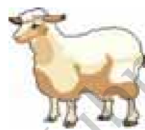
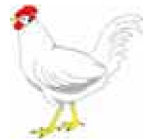

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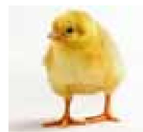
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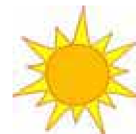

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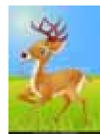

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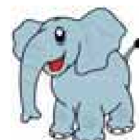
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ÞǴǌǒƼ þƧƒĂ!ƒ ýǂT!ƒ ǅƪƒ ǇǆýĂǕƒ ƻƨơ!ƒ Ă ƖƨĂƮ!ƒ ǇǑǃ ƱƤǃ ýƮ ǕƘĂƮ!ƒ Ăǅ ýǂT!ƒ

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_______________________ƗʅƧþdž!ƒ________ƻ Ʈ!ƒ_________________:Džʅ Ǔƒ

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ÞlƧĂƮ ýǂ Džʅƒ LJdž ýĂŪƒ ƻƧơ!ƒ ýĂơ lƧƒþ ýư ÜKĂƮ!ƒ ĂD ýǂT!ƒ

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þƧŋdž!ƒ ƻƧŋ!ƒ ƳǉǴŋ Ĭ!ǫ ƧĂơdž!ƒ ƻƧơ!ƒ ƗƵĂdžŋdž ƗƮǴP ĭþƧƼ ƗǒdžǒǇƙ ƗƱP! ýǴĂdž .4

hǔǭþ2ǁǁ hǔĨĎŽĭǂyǂǁǁ hǓǬǁǁ

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.%100ΘǅŋǇ ǂǁƪǇǁ

Ĭ ĎŽĭǂyǂǁǁ ƒŊǂƨǙǁ	ƦĨƦyǂǁŊ hǔĎŽǭǂƨĎŽǁǁ ǭƐŊĎŽǁŊ üƏƒƨ Ŋǁǁ	(hǔĎŽŊĎŽǁǁ üĭǂΘǂ) hǔǏþ2ǁǁ ƹƐǭǉǙǁ
ǇĴùǂ ,Ɣ!ǅƱ!ƒ ĬǁƵ ǂŏơǩ!ƒ ǅǅǁ!ǫ :hǔƌĭŊǂǁǁ 2ùŏǂ" ĂĎ "ƧùŏƤ!ƒ ΘǅǁƮ" Ɣ!ǅƱǁ! ýĂpĎ "ǁ!ǅơ ,2!Ǖƒ 2Ƨơǁ Ɣ!ǅƱ!ƒ ǂƺŋƒƧǆ :ǭĭŊĎŽǁǁ ǅǅùǁ!ƒ 2Ƨơ ǂpǅƱǁ ƲƧƺǁ ĎǐĂpĎ Ďǩ ǇĴǆĂ þƧùŋǆ ǅǁ 2Ƨơ ŊǁǇǅŋ Ĭ!ǫĂ ƧĂƮǆ!ƒ ǂùǁǅǩǂ Ĭù!ǫ ǂ5ǅùƲǙǁ ýǆƺ!ƒ ǂpƧĂĂ Ɣù!ǅƱǁ! ýĂpĎ Ďǩ ,lƧĂǁƪ!ƒ ĬǁƵ 2Ƨơ!ƒ ĂùT ƧƨơƒþŏþŊ 2Ƨơ Ďǁǆǩǉ ΘƧ ĎǐĂŏ!ƒ" ǂơŏơùƮ ǂǁǅŋǫ Ɣ!ǅƱ!ƒ ƔǅŋĎ ƒƦƎ "ĂŊ Ɣ!ǅƱ!ƒ 2Ƨƺŏ Ďǐ! ƒƦǫĂ "ƨǅǆǆ" :Ŋ! ýĂpĎ :Ŋù! ýĂpĎ ǂƑƱǅƤ ǂǁǅŋǫ ƔǅŋĎ ĂĎ ǂǁǅǕƒ ĬùǁƵ ΣƧþù!ƒ Ŋƺǆ ĎþǁĎĂ "2ĂTǇ ǅǇŏǁƤ" .ŎǩǕƒ Ăơǉ!ƒ Ɣù!ǅƱ!ƒ ĬùǁƵ ƲƧƵĎ :hǔĎŽŊĎŽǁǁ ƒþǏ Ĭù!ǫ ǅǁ!ƒ 2Ƨơ ǂǉǆƲǩǆ "ǂƱǁ!ƒ" lƧĂƮ ýƌùƪƒ Ďǐùǩ ,ǯþƧùŋǆ ǅǁ!ƒ 2Ƨơ ǅŋǁǇǅŋ ƒƦƎù5 , "ƤlƧĂƮù!ƒ ǉƦŊ ŎŊ ǅǆ" Ɣ!ǅƱ!ƒ	Ĭù!ǫ ǂŏƧĂƮù!ƒ 2ĂƧùơ!ƒ ƘǅùpǅƱǁ þƧŋǆ!ƒ 2Ƨơ!ƒ ǅŋǁǇǅŋ ĭĂùǩơǩ Ŏǩ!ƒ ǂŏƧĂƮ!ƒ 2ĂƧơ!ƒ ŎŊĂ 2Ƨùơ ǂǉǆƲùǩǆ ǂ5Ă!ǆ lƧĂƮ ĬǁƵ .þƧŋǆ!ƒ 2Ƨơ!ƒ ǅŋǁǇǅŋ Ĭ!ǫ ǇŏƺǆǇƒĂ!Ď ǇŏǆǁƺǆǁƒĬǁƵ ǅŋƺŏƨĂǩ Ďǩŏ ǂŏǁƮƤ ǇƒĂ!Ď ǂƪƒƧþ!ƒ Ŏ5 ǂǂƧǅƮǆ!ƒ ýǆƵ ǂpƧĂ Ƨŏƹ ƧĂƮǆ!ƒ 2Ƨơ!ƒ ǇƵ lƧǅǁƵ ŎŊĂ ǂ5ǅùƲǙǁ ǅŋǇŏĂǁǩǁ Ɣ!ǅƱ!ƒ ĎǐĂlŏ ǇĴĂǁǆ Ɣù!ǅƱ!ƒ ĬùǁƵ ǂƱǁǇǆ 2ĂƧơ Ĭ!ǫ .2Ƨơ!ƒ ýŏǂTǩ! ǅŋ!ǅƮŏǫ . ƒ ǅƮƧ Ďǁp .lǅơǆǆ Ăǁƪ ƘƒƧǅǁƵ ĭĂǉǆ /(ĎǐĂŋǇ)ĭþǅǆ :ƦĨƦyǂǁǁ (ýƱǁ /ƘǇƪơĎ/ƨǅǆǆ)ǇǅƪơǩƪǕƒ	.ǅǁ!ƒ 2Ƨơ ĬǁƵ Ɣ!ǅƱ!ƒ 2Ƨƺŏ ǇĴ ýŏǂTùǩ! ƱǅùlǇ!ƒ Ɣ!ǅƱ!ƒ ýƮŏ ǇĴ ǅǁ!ƒ 2Ƨơ ǇĴùǆ ǅǅùǁ!ƒ 2Ƨơ Ɣ!ǅƱ!ƒ ǭƪǇŏ ǇĴ ǗƦĂǆǇ ǇĴùǆ ǅǁ!ƒ 2Ƨơ Ɣ!ǅƱ!ƒ Ɣǩǂŏ ǇĴ lƧǂƒƦ!ƒ ǅǅùǁ!ƒ 2Ƨơ Ĭ!ǫ Ɣ!ǅƱ!ƒ ƧŏTŏ ǇĴ ǂǆǁǂ!ƒ Ŏ5 ǅǁ!ƒ 2Ƨơ Ɣ!ǅƱ!ƒ ƾƱǇŏ ǇĴ

[illegible]		

[illegible]		

6. [illegible]

[illegible]

([illegible])

[illegible]: . . . . [illegible]: . . . .

[illegible]: . . . . [illegible]: . . . . [illegible] . . . . . .

[illegible] . . ./. . . . . . ./. . . . . . . [illegible] . . . . . ./. . . . ./. . . . .

[illegible] : ([illegible]) [illegible] .

[illegible] : ([illegible]) [illegible]

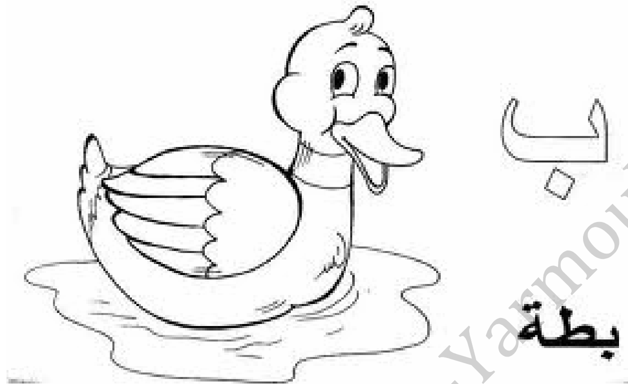
.%100 [illegible]

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

ƓdžƋ "ƘǈƪơƋ ,ƨƓkdždž" NJ! ýĂpƋ ƗơǒơƬ LJđù ǂ ƗƑƱƓƤ ƗhƓȠƥ Ɣ!ƓƱ!ƒ ƔƓȠƋ ƒƦƥ "ƇƓùƙ" ĂƋ "LJĂǈ" ĂNj ƧƨơǃƒLJƋ ýĂǀǒ Ɣ!ƓƱǃ! DžƥpƋ Džƙ.NJkhƓȠƥ ƠǒơƬkh DžĂpƋ LJĂùǃǒ LJƋ NJùǈdž ƔǃƱƋĂ ýdžƵ ƗpƨĂ ýǒǂƬùƙ! ƱƓǀǈ!ƒ ýƬĂǒ LJƋĂ ǀƨĂƬ!ƒ ƧƨùơƗùhƓkǂ Džƙ LJdžĂ "ƇƓh!ƒ" ƧƨơƝ .ƱǒǀǈƙLJĂƥh "ƇƓh!ƒ" ƗǒdžƪƙƔ!ƓƱ!ƒ ǏǃƵ :ƒǁƑƯǁƐ hƓƑǁǂƨƐ LJƋ Džƙ LJdžĂ,ǀƨĂƬ!ƒ NJǃǃdžƙ ƓdžĂ ƧƨơƝ!ƒ ,ǀƨĂƬù!ƒĂ ƇƓh!ƒ ƧƨơLJǒĂǃkh DžĂǀǒ Džùƙ LJdžĂ ƱƓǀǈ!ƒ ǏǃƵ ƧƨơƝ!ƒ ƗhƓkǂĂ .ƱǒǀǈƙLJĂƥ NJkhƓkǂ :!ǐNjȿƗǁƐ LJdžưùƙƙ ýùdžƵ ƗpƨĂ Ɣ!ƓƱǃ! Džƥǀǒ ,ƗƱh) ƇƓh!ƒ ƧƨơýĂơǀƨƑƥ ýưĂ (ƔƓh ,ýƬh ,Ɣƥ ,Ƙǒh ,DžĂh		

(7) !ѣϸ 5ѲǂǄǁЄ

ƛЇǄЇǂɏƗ üǄƳ ƛѣϸǋ



ـب ـب ـب ـب ـب

ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù

ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù

ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù

ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù

ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù   ù ù ù ù ù

(8) !ɓϸ ƼѲɨDžǁɛ

ǈĭDžĭĭƭɫ üDžƳ ƕɓϸǋ

(ƇƓƕ!ƒ ƻƧơ)

:ƳùǃƓƱ!ƒ Džƪƒ .Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ

:ɫùƪƧϸdž!ƒ Džùƪƒ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ

:ƻ Ʈùù!ƒ Ľ Ľ Ľ .... Ľ Ľ . Ľ Ľ Ľ Ľ Ľ ..

:Ʃǉùùŋ!ƒ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ .

:Ƨdžƶ!ƒ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ Ľ

ضع دائرة حول حرف الباء في الكلمات التالية.

ɫƱƕ DžǍƕ

ƘǒƕɁ Ƴϸ

ý Ʈ ƕ ƳƓƕ

ƳƓƶ!ƒ ƳǍùƛ

ƳǄƶƛ Ƴ!ƓƱ

(9) ƽƟǂǅǄ

!ǂƴƺǄ ǀƑǋƴƮ ăǋƤ ƷƑǂƯǂ ƷƑƨǄƑƑ ƷƧǄ ƥǀǀǛ ƥǋƮǂ ƷĭǋǆǅǄ ƒ ƨǄ

ƷƑƨǄ	ƽƑƸǛ	ƴƥǋƮǄ	ƹƥƟǄ
%25	6		Ƙ
%75	18		
%39	7		ǁ
%71	17		
%4	1		Ш
%96	23		ج
%42	10		Ɵ
%58	14		
%48	12		þ
%52	13		
%83	20		ƨ
%17	4		
%83	20		ƨ
%17	4		

ƽǴ ƨ ǆǁƐ	ƼƑƻŰƐ	ƔƥǋTǁƐ	Ƹ ƥƟǁƐ
%62	15		Σ
%38	9		
%25	6		ƒ
%75	18		ص
%8	2		Ʊ
%92	22		
%62	15		Y
%38	9		
%96	23		ƻ
%4	1		

(10) !ƽþ ƼƟǂǷŽШƐ

ƼĭĆƯǂШ ĬǼǷŽƦШƐ üŇǰƣШƐ

ÞƐþШŰƐ	ơĭþƒǂШƐ	ƱŇǰĆƨŮƐ	ƕƨǂШƐ ƔƣǷŽ	ƕƨǂШƐ
ǇǑǆǅƶǆ!ƒ ƗǅƕĆǀǆ ƗǅƱ!ƒ ƧĈǒƘƤƒĂ	2012/9/13-9	ýĂŰƒ	_	Ĭ!ĂŰƒ
ǇǑǆǅƶǆ!ƒ ƗǅƕĆǀǆ ƗǅƱ!ƒ ƧĈǒƘƤƒĂ	2012/9/13-9	ýĂŰƒ	_	ƗǒǈĈƛ!ƒ
ǇÜƗ ÜƘ ÜƔ	2012/9/20-16	ŎǈĈƛ!ƒ	ƳĂƕƪƊ /ǇĆƙƬơ	ƗƛĆƛ!ƒ
ǇÜƗ ÜƘ ÜƔ	2012/9/20-16	ŎǈĈƛ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ƗƶƕƒƩ!ƒ
ƣ ÜƟ ÜШ	2012/10/27-23	Ɨ!Ĉƛ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ƗƪǆĆƤ!ƒ
ƣ ÜƟ ÜШ	2012/10/27-23	Ɨ!Ĉƛ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ƗƪþĆƪ!ƒ
Ʀ Üþ	2012/10/ 4-9/30	ƴƕƒƩ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ƗƶƕĆƪ!ƒ
Ʀ Üþ	2012/10/ 4-9/30	ƴƕƒƩ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ƗǈǆĈƛ!ƒ
ƨ ÜƧ	2012/10/11-7	ƩǆĆƤ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ƗƶƪĆƙ!ƒ
ƨ ÜƧ	2012/10/11-7	ƩǆĆƤ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬĆƶ!ƒ
ƫ ÜƩ	2012/10/18-14	ƩþĆƪ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗǒþĆơ!ƒ
ƫ ÜƩ	2012/10/18-14	ƩþĆƪ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗǒǈĈƛ!ƒ
Ư Ü ƒ	2012/10/25-21	ƴƕĆƪ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗƛĆƛ!ƒ
Ư Ü ƒ	2012/10/25-21	ƴƕĆƪ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗƶƕƒƩ!ƒ
Ʊ ÜƱ	2012/11/1-10/28	ǇǆĈƛ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗƪǆĆƤ!ƒ
Ʊ ÜƱ	2012/11/1-10/28	ǇǆĈƛ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗƪþĆƪ!ƒ
Ʒ ÜƳ	2012/11/8-4	ƴƪĆƙ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗƶƕĆƪ!ƒ
Ʒ ÜƳ	2012/11/8-4	ƴƪĆƙ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗǈǆĈƛ!ƒ
ƽ Üƻ	2012/11/21-14	ƧƬĆƶ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǉƧƬƵ ƗƶƪĆƙ!ƒ
ƽ Üƻ	2012/11/21-14	ƧƬĆƶ!ƒ	ƳĂƕƪƊ / ǇĆƙƬơ	ǇĂƧƬƶ!ƒ
ǊǆĆǉƧƕ!ƒ ƻþĂƙ	2012/11/28-24	ĭþĆơ!ƒ ƧƬƵ	-------	ǇĂƧƬƶ!ƒĂ ǉþơƒĂ!ƒ

ƀєƥшǕє	ơĭƥƑǂǁє	ƱNjǴ ƨ Ǔє	ƕ ƨ ǂШǁє ƔơǅǄ	ƕ ƨ ǂШǁє
ŊdžǴǈƧƕ!ƒ ƻ pĂƙ	2012/11/28-24	ƧTƵ ĭ ƥǴơ!	--------	ǇĂƧTƶ!ƒĂ ǂöǈǴƛ!ƒ
ŊdžǴǈƧƕ!ƒ ƻ pĂƙ	2013/12/4-31	ƧTƵ ŎǈǴƛ!ƒ	--------	ǇĂƧTƶ!ƒĂ ǂƛ!Ǵƛ!ƒ
ŊdžǴǈƧƕ!ƒ ƻ pĂƙ	2013/12/4-31	ƧTƵ ŎǈǴƛ!ƒ	--------	ǇĂƧTƶ!ƒĂ ǂƶƕƒƧ!ƒ
ǂƶƕǴkdž!ƒ ƧǴƕƙƤƒ	2013/12/11-7	ƧTƵ ł !Ǵƛ!ƒ	--------	ǇĂƧTƶ!ƒĂ ǂƪdžǴƤ!ƒ
ǂƶƕǴkdž!ƒ ƧǴƕƙƤƒ	2013/12/11-7	ƧTƵ ł !Ǵƛ!ƒ	--------	ǇĂƧTƶ!ƒĂ ǂƪƥǴƪ!ƒ
		ǴƵĂƕƪĐ 13	ǂödžöǈƶƙ ǂƮơ	ƳĂdžƞdž!ƒ

(ƒ) 5Ɵǂǅ

ǄǐǅǀƟǅǁ ƀƑǅƨƈ

ƑǊǆǅ ƒƨǆǗ ƥƑǐǂǀǗ ƺǋƥƟǁ ǋǅǀƟǅ .1

üǅƴǁ ǅƑǀǅ	!ǀƟǅǁ !ƨǁ	!ƽƥǁ
ǁǍǆƧǒ!ƒ ǂƶǆǴƞ /ǐǍǆƧǨ!ƒǍ ǐƥǴƬƧǗƒ Ʃƽǉ!ƒ ǄǁƵ ǄƪƿƤ	ýǍƺƨ!ƒ ƴ5ƒƧ ƧǍǨǂƥ!ƒ ƦǴǨƪǕƒ	1
ǁǍǆƧǒ!ƒ ǂƶǆǴƞ /ǐǍǆƧǨ!ƒǍ ǐƥǴƬƧǗƒ Ʃƽǉ!ƒ ǄǁƵ ǄƪƿƤ	ǂǉǍǖƵ ƾǒ5Ƭ ƧǍǨǂƥ!ƒ ƦǴǨƪǕƒ	2
ǁǍǆƧǒ!ƒ ǂƶǆǴƞ /ǐǍǆƧǨ!ƒǍ ǐƥǴƬƧǗƒ Ʃƽǉ!ƒ ǄǁƵ ǄƪƿƤ	Ǒǁƶ!ƒ ƧƮǉ ƧǍǨǂƥ!ƒ ƦǴǨƪǕƒ	3
ǁǍǆƧǒ!ƒ ǂƶǆǴƞ /ǐǍǆƧǨ!ƒǍ ǐƥǴƬƧǗƒ Ʃƽǉ!ƒ ǄǁƵ ǄƪƿƤ	ǐƧǍǆơ!ƒ Ʃƒƨ5 ƧǍǨǂƥ!ƒ	4
ǁǍǆƧǒ!ƒ ǂƶǆǴƞ /ǐǍǆƧǨ!ƒǍ ǐƥǴƬƧǗƒ Ʃƽǉ!ƒ ǄǁƵ ǄƪƿƤ	ƟƒƧƞ!ƒ ƧƮǴǉ!ƒ ƥǆƵ ƧǍǨǂƥ!ƒ	5
ǁǍǆƧǒ!ƒ ǂƶǆǴƞ /ƩǒƧƥǨ!ƒǍ ǊǋǴǉǆ!ƒ ǄƪƿƤ	ǀƥ!ƒǍƤ!ƒ Ǒǁƶ ƥǆơǆ ƧǍǨǂƥ!ƒ	6
ǁǍǆƧǒ!ƒ ǂƶǆǴƞ /ǐǍǆƧǨ!ƒǍ ǐƥǴƬƧǗƒ Ʃƽǉ!ƒ ǄǁƵ ǄƪƿƤ	Ƙƒƥǒǋǆ ƥǆơǆ ƧǍǨǂƥ!ƒ	7
ǁǍǆƧǒ!ƒ ǂƶǆǴƞ /ƩǒƧƥǨ!ƒǍ ǊǋǴǉǆ!ƒ ǄƪƿƤ	ƧǒƯƤ ƥƑƒƧ ƧǍǨǂƥ!ƒ	8
ǄǒǁƶǨ!ƒǍ ǂǒǆƧǨ!ƒ ǀƧƒƨǍ Ǒ5 Ǆǁƶǆ	ƳǍƥƞ!ƒ ǇǒƪơƥǴǆƵ ƦǴǨƪǕƒ	9
ǄǒǁƶǨ!ƒǍ ǂǒǆƧǨ!ƒ ǀƧƒƨǍ Ǒ5 Ǆǁƶǆ	ǴƬǴǆơ ǄǒǋƒƧǆ ƥ!ǴƤ ƦǴǨƪǕƒ	10
ǄǒǁƶǨ!ƒǍ ǂǒǆƧǨ!ƒ ǀƧƒƨǍ Ǒ5 Ǆǁƶǆ	ǂƬơƒƧơ!ƒ ǁǒ!ǴǂƵ ƦǀǉǆƦǴǨƪǕƒ	11
ǄǒǁƶǨ!ƒǍ ǂǒǆƧǨ!ƒ ǀƧƒƨǍ Ǒ5 Ǆǁƶǆ	ǇǴƶǉǂ ƥǆǴơ ƨǒǴ5 ƦǴǨƪǕƒ	12

üDžyǁǁ ƼƐƥNjcNj hǔDžǐǂyǂǁǁ ƯƯƣǁǁ ǏDžǀƟDž ƅƑDžƨƈ .2

hǔƣƥƻǁǁ hǔDžǐǂyǂǁǁ ƯƯƣǁǁNj Ǐ ƨǐƥƣǂǁǁ ƛDžƑdžƥƓǁǁ NjDžǀƟDž

üDžyǁ DžƑǀDž	!ǀƟDžǁǁ !ƨƐ	!ƽƥǁǁ
ǁ ĂdžƧö!ƒ ǂƶdžƓƞ /ǂ Ƭ ƓƤ ǂöƕƧƙ	Ƙƒƥönjdž ƥdžơdž ƧĂƙǂƥ!ƒ	1
ǂöǉƥƧǕƒ ǂƶdžƓƞ!ƒ /ǂ Ƭ ƓƤ ǂöƕƧƙ	Ƙǚ!ƒƥƕƶ!ƒ DžƓʅƕ ƧĂƙǂƥ!ƒ	2
ǐ ƧƕƓƞ!ƒ ƥdžơdž ƧĂƙǂƥ!ƒ	ǐ ƧƕƓƞ!ƒ ƥdžơdž ƧĂƙǂƥ!ƒ	3
ýĂʅƧ!ƒ Ƙǉƕ ǂöƥƧ ǂʅƧƥdž	ǀƧöƓƺdž ǇƓdžöǫ ǂdžǁƶdž!ƒ	4
ǇöǉƕǗ! ǂöʅƓʅǕƒ ƘöƧƨƵ ǂʅƧƥdž	ƳĂƥƞ!ƒ Ǉöʅơ ƥƓdžƵ ƦƓƙʅǕƒ	5

ملحق (ج)

كتب تسهيل المهمة

بسم الله الرحمن الرحيم

وزارة التربية والتعليم
مديرية التربية والتعليم للواء قصبة اربد

الرقم
التاريخ
الموافق

مدير / مديرة مدرسة ....

الموضوع/البحث التربوي

السلام عليكم ورحمة الله وبركاته...

اشارة إلى كتاب عطوفة رئيس جامعة اليرموك رقم ك ت/107/979 تاريخ 2012/9/10 م. يقوم الطالب محمد عبد الرحمن ابراهيم كنانعة بدراسة بعنوان "فعالية استراتيجية تذكر الحروف المصورة في تعلم الحروف العربية المتشابهة لدى الطلبة ذوي صعوبات التعلم في الاردن". و ذلك استكمالاً لمتطلبات الحصول على درجة الماجستير في كلية التربية تخصص التربية الخاصة. ويستدعي ذلك تطبيق أدوات الدراسة "اختبار التعرف على الحروف" على عينة من الطلبة ذوي صعوبات التعلم والمنتظمين في غرف المصادر في مدرستكم.

يرجى التكرم بتسهيل مهمة الطالب المذكور وتقديم المساعدة الممكنة له.

وتفضلوا بقبول فائق الاحترام

/ مدير التربية والتعليم

الدكتور نادر هارون صلاح
مدير الشؤون التعليمية والفنية

نسخة للحيثية/ مدير الشؤون التعليمية والفنية
نسخة للسيد/ ر.ق. التدريب والتأهيل والإشراف التربوي

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جامعــة اليرمــوك
YARMOUK UNIVERSITY

كليــة التربيــة
مكتب العميد

الرقم: ك ت/١٠٧/ ٩٧٤
التاريخ: ٢٤/ شوال/ ١٤٣٣
الموافق: ١٠/ أيلول/ ٢٠١٢

السيد مدير مديرية تربية اربد الاولى المحترم

الموضوع: تسهيل مهمة الطالب محمد عبدالرحمن ابراهيم كناعنه

السلام عليكم ورحمة الله وبركاته،،،

يقوم **الطالب محمد عبدالرحمن ابراهيم كناعنه** ذو الرقم الجامعي (٢٠١٠٤٠٢٠٢٢) بدراسة بعنوان **" فعالية استراتيجية تذكر الحروف المصورة في تعلم الحروف العربية المتشابهة لدى الطلبة ذوي صعوبات التعلم في الأردن"** وذلك إستكمالاً لمتطلبات الحصول على درجة الماجستير في كلية التربية تخصص التربية الخاصة ويستدعي ذلك تطبيق أدوات الدراسة (اختبار التعرف على الحروف) على عينة من الطلبة ذوي صعوبات التعلم والمنتظمين في غرف المصادر في مديرية تربية اربد الأولى.

أرجـو التكرم بالاطـلاع والموافقـة علـى تسهيـل مهمـة الطالبة المذكورة أعلاه .

وتفضلوا بقبول فائق الاحترام،،،

عميد كلية التربية

أ.د. أمل خصاونة



٦٢٤٥

هاتف: ٧٢١١١١١ - ٢ - ٩٦٢ فرعي ٢٦٢٨ أو ٢٧٢٩ فاكس: ٧٢١١١٩٩ - ٢ - ٩٦٢ اربد - الأردن
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Abstract

Kanaaneh, Mohammad. The Effectiveness of Pictured Letters Mnemonics Strategy in Learning Similar Arabic Language Letters among Learning Disabled Students in Jordan, Master Thesis, Yarmouk University, (2013).

(Supervised by Dr. Qais Almeqdad)

The study aimed at identifying the effectiveness of pictured letter mnemonics strategy in learning similar Arabic language letters among students with learning disabilities in Jordan, and whether it differs according to teaching method, gender, and its Interaction. To achieve this a training program consisted of three teaching methods was developed, these were: presenting embedded pictures to similar letters, presenting embedded pictures to similar letter with abstract letters, and presenting letters in conventional method, a number of 60 (male and female) students with learning disabilities participated in the study, and were assigned equally in to one of each method listed above. Two equal versions of achievement test, were developed and used as pre- post test, and another achievement test was developed and used for the purpose of follow up. The study conducted over a 13_ week period.

According to the analysis of pre-post test, the results showed that there were statistical significant differences in teaching to presenting embedded pictured letter with abstract letter, followed by presenting embedded pictures letter in comparison with convent and teaching method, respectively, it also indicated that there were no statistical significant differences due to variable due to gender, and the interaction between group and gender.

Keywords : Mnemonics, Presenting Embedded Pictures, Persons with Learning Disabilities